Andy's Ham Radio Linux

Andy Stewart
KB1OIQ
February 23, 2026

Presented to:
Border City Radio Club
Windsor, ON, CANADA

kubuntu

Biographical Info

Tech: 1/07, General 1/08, Extra 1/09

President: PART of Westford, MA (9/09 – 8/19)
Vice President: 01/26

ARRL EMA: Assistant Section Manager (2016), ACC (2017)

Founder: Worcester Linux Users' Group (1997)

Founder and Acting President:
Chelmsford Linux Meetup Group (2006-2020)

Linux Instructor:
Chelmsford Community Education (2004 - 2011)

Linux user since 1997

Computer Engineer – digital logic verification – Retired 08/2024

kubuntu

Most Recent Interests

- Antique radios
  - Repair and cleanup, especially 1920s/1930s radios
- Joined a Makerspace (MakeIt Labs NH, USA)
  - Fabricated a wooden box for 1940s Meissner 8C
  - Created wooden laptop enclosure RPI 500
  - Soldersmoke: direct conversion 40m receiver
  - Pi Pico SDR
- Fox hunting, POTA, chasing rare DX
- Of course: Andy’s Ham Radio Linux (AHRL)

Pi 500 Laptop Enclosure

kubuntu

Goals

- Promote Linux
- Give back to ham radio and Linux communities
- Build on top of an existing Linux distribution
- Create a software collection containing as much ham radio software as possible – nothing proprietary
- Goal: Everything just works!
- Focus on the radio hobby!
- The idea of ”Andy’s Ham Radio Linux” began this way in 2011

What is AHRL?

- Ham radio software found on the internet
- Collected in one place for the user community
  - Everything is Free Software,
    Open Source Software, or equivalently licensed
  - Packaged for easy installation
  - Multiple Linux flavors are supported
  - Raspberry Pi OS 5.* supported on RPI 4/5
  - Menus customized for ease of use

kubuntu

AHRL: The Past

- V25 and earlier were heavily customized versions of Xubuntu Linux
- This worked well for 13 years, but …
  - It was not easily customizable by the user
  - No other flavors of Linux
  - Each release was handcrafted
    - tedious and time consuming x 2 (32/64 bit)
  - No documentation of how it was created
  - The downloadable ISO file was HUGE (around 5 GB)
  - There was no upgrade path between AHRL versions

kubuntu

AHRL: The Present

- Starting with V26:
  - First, the user installs a supported flavor of Linux
  - Secondly, the user downloads and installs AHRL
  - Magically, everything just works (one hopes!)
  - Lastly, have fun with the new software!

AHRL V26 Changes

- Installation script:
  - Serves as documentation
  - Customizable
- Much smaller tar.gz file: 675 MB
- Multiple Linux flavors are supported:
  - Debian Live, LMDE
  - [XKU]buntu Linux
  - Linux Mint (Cinnamon)
  - Raspberry Pi OS
- Install updates on top of previous AHRL V26

kubuntu

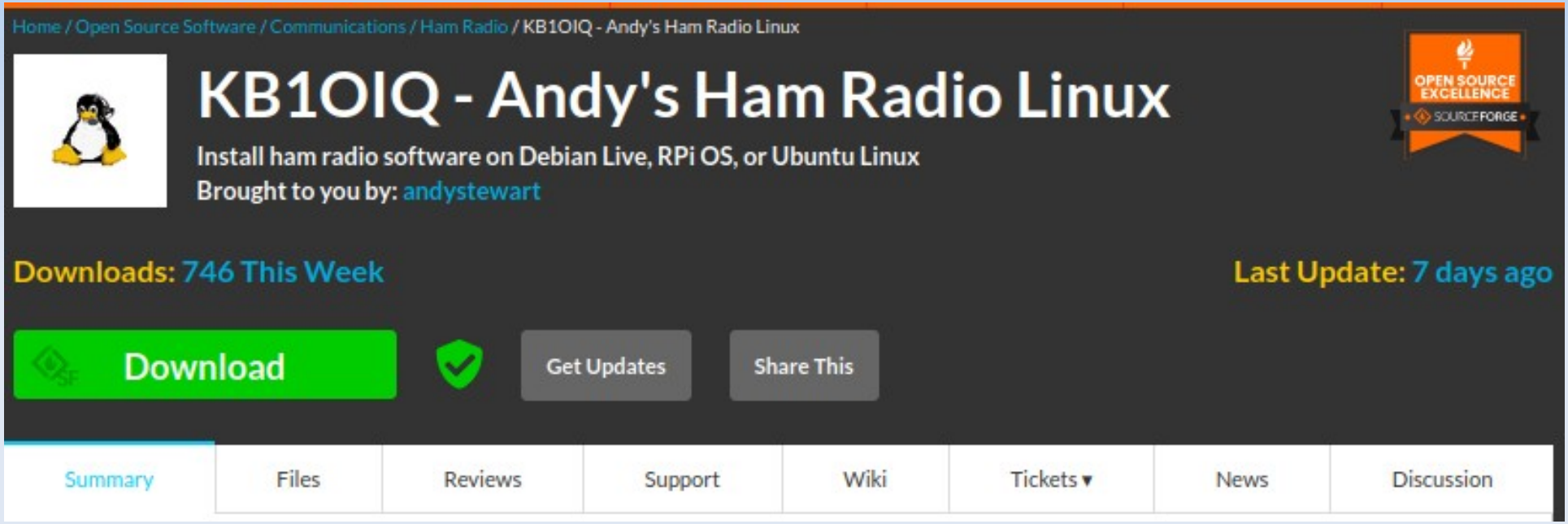
Target Computer

- Any x86_64 computer 10 years old or less
  ...or…
  Raspberry Pi 4/5/400/500
- Memory:
  - Minimum: 2 GB
  - Recommended: 8 GB
- Storage for AHRL
  - 15 GB after installation
- Functioning network

Obtaining AHRL

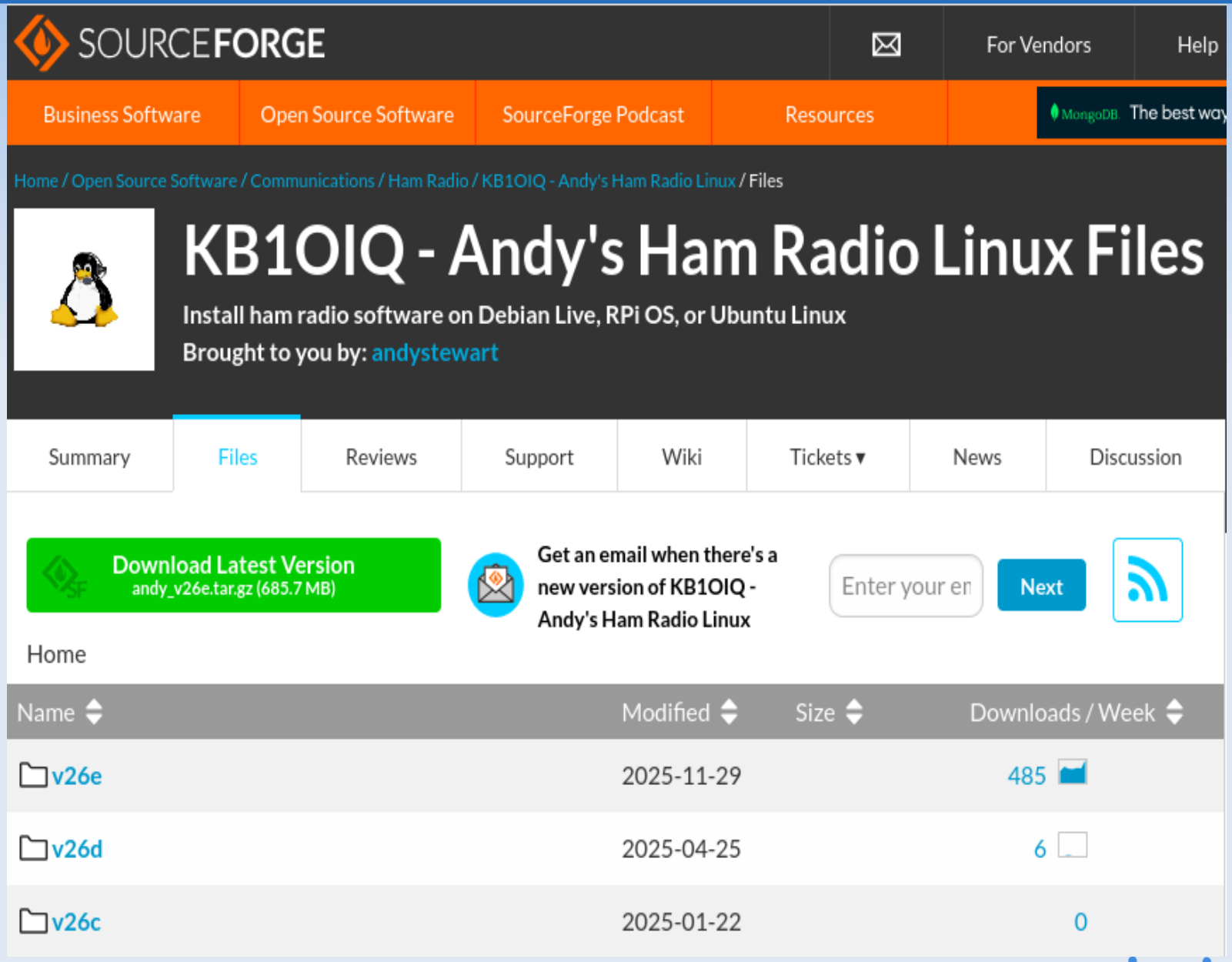
- Download the file from SourceForge:
  - http://www.sf.net
  - Search for: Andy's Ham Radio Linux
  - Current version: v26e
    - Released November 29, 2025
  - Click the big green ”Download” button
    - andy_v26e.tar.gz
  - Also: Files → v26e → GETTING_STARTED
  - ---> Please read the GETTING_STARTED guide(!!!) <---
  - ---> Please read the GETTING_STARTED guide(!!!) <---

Sourceforge Website



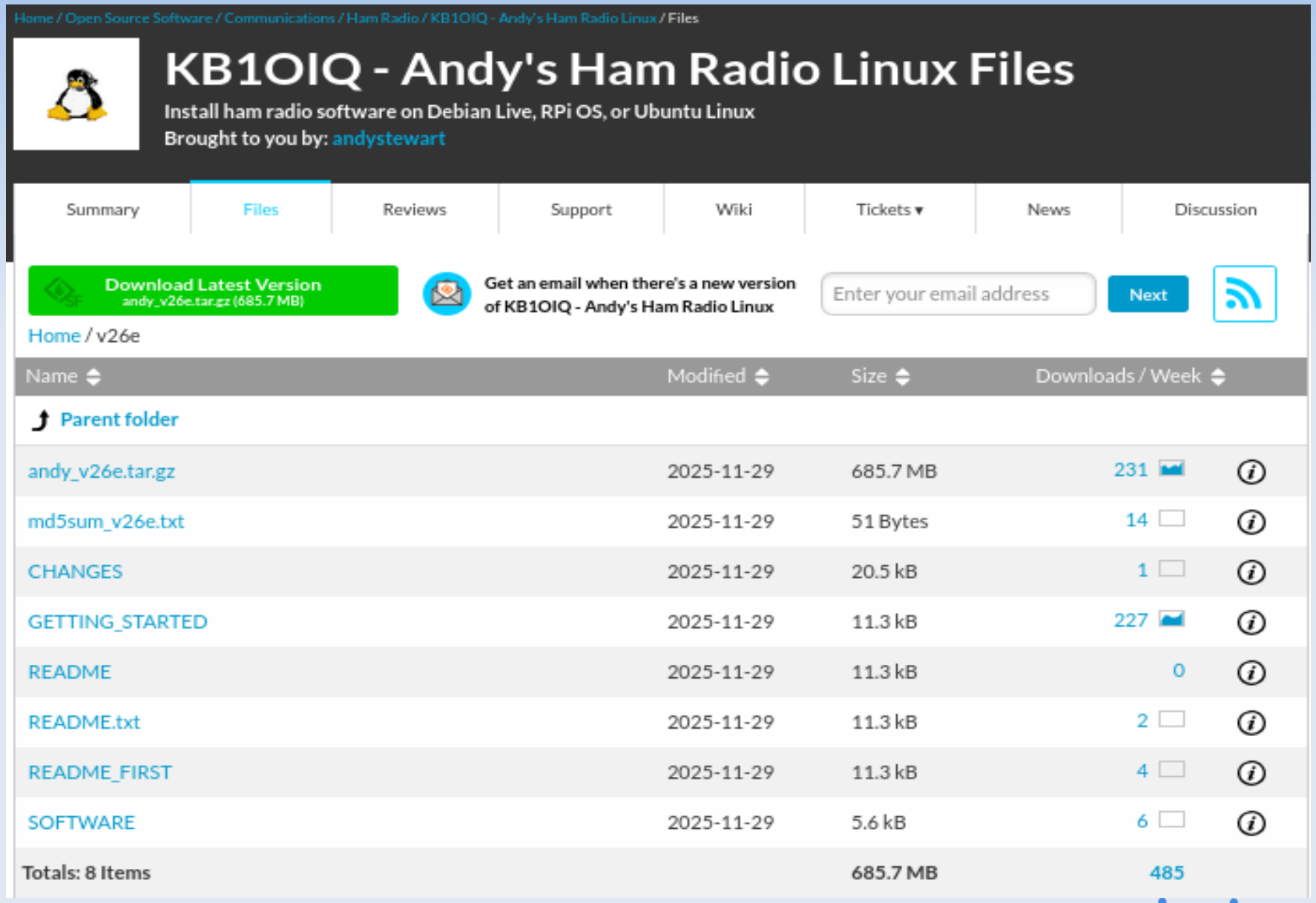
kubuntu

Sourceforge Website



kubuntu

Sourceforge Website



Home / Open Source Software / Communications / Ham Radio / KB1OIQ - Andy's Ham Radio Linux / Files

KB1OIQ - Andy's Ham Radio Linux Files

Install ham radio software on Debian Live, RPi OS, or Ubuntu Linux

Brought to you by: andystewart

Summary | Files | Reviews | Support | Wiki | Tickets ▾ | News | Discussion

Download Latest Version
andy_v26e.tar.gz (685.7 MB)

Get an email when there's a new version of KB1OIQ - Andy's Ham Radio Linux

Enter your email address | Next

Home / v26e

Name	Modified	Size	Downloads / Week
Parent folder			
andy_v26e.tar.gz	2025-11-29	685.7 MB	231
md5sum_v26e.txt	2025-11-29	51 Bytes	14
CHANGES	2025-11-29	20.5 kB	1
GETTING_STARTED	2025-11-29	11.3 kB	227
README	2025-11-29	11.3 kB	0
README.txt	2025-11-29	11.3 kB	2
README_FIRST	2025-11-29	11.3 kB	4
SOFTWARE	2025-11-29	5.6 kB	6
Totals: 8 Items		685.7 MB	485

kubuntu

Installing AHRL

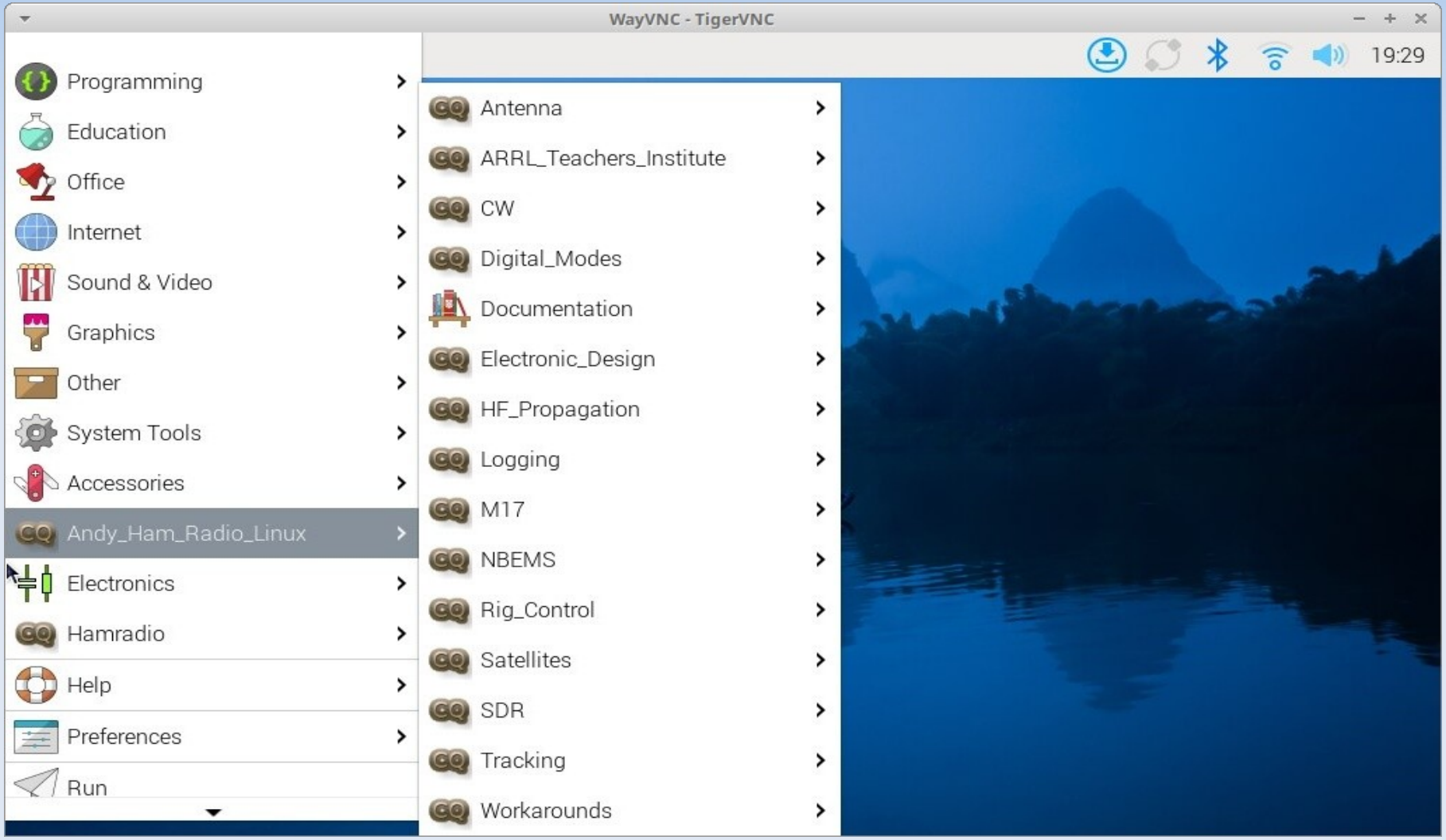
- Follow the instructions in GETTING_STARTED
  - (you read it, right?)
- Reboot the computer
- Peruse the menus and see what’s there!

kubuntu

Menu Differences

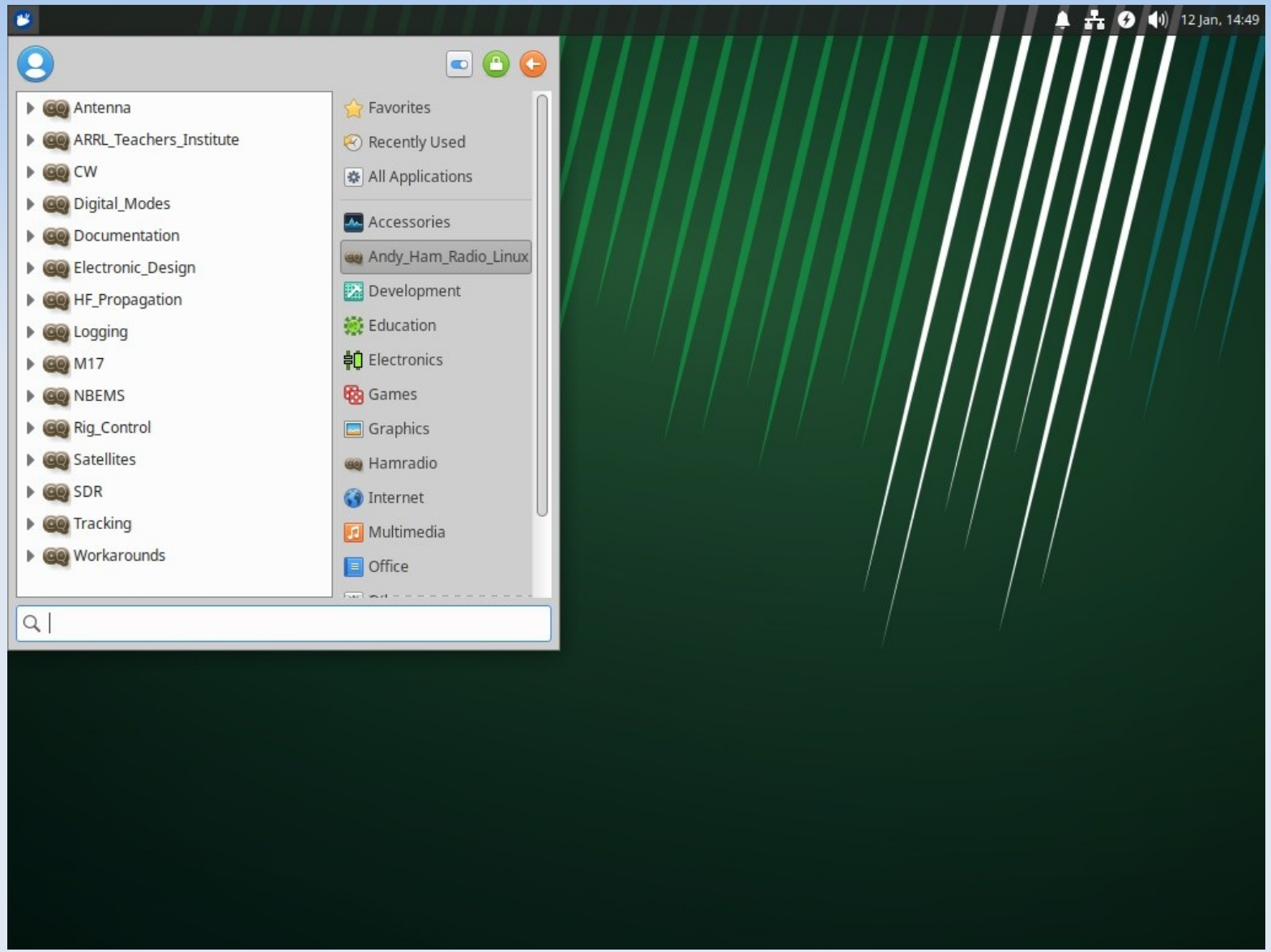
- Some Linux flavors support multi-level menus
  - Raspberry Pi OS
  - Xubuntu
  - Debian Live
- Some do not
  - Linux Mint, LMDE
  - Kubuntu

Raspberry Pi 5
AHRL v26e Menu



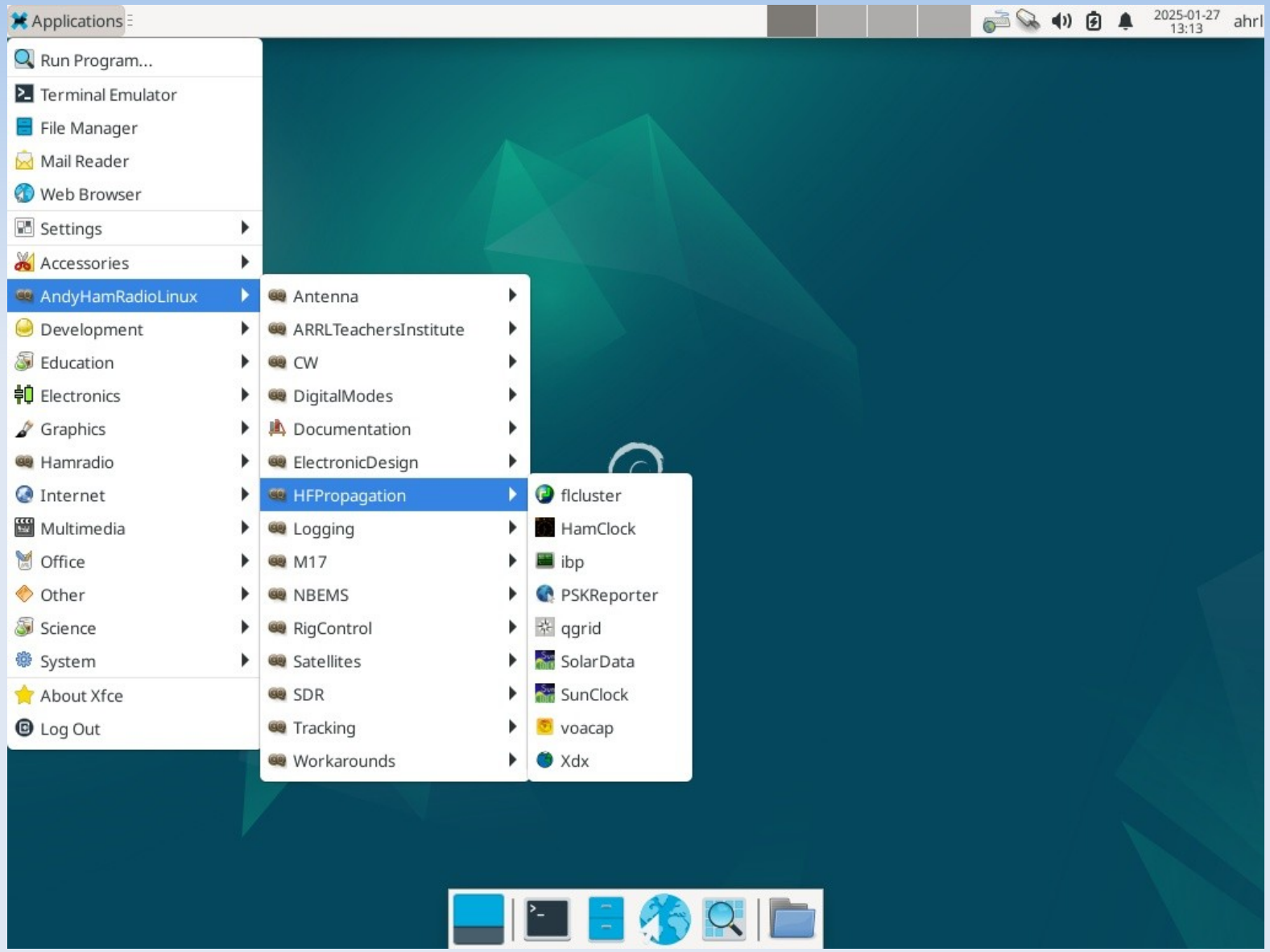
kubuntu

Xubuntu 24.04
AHRL v26e Menu



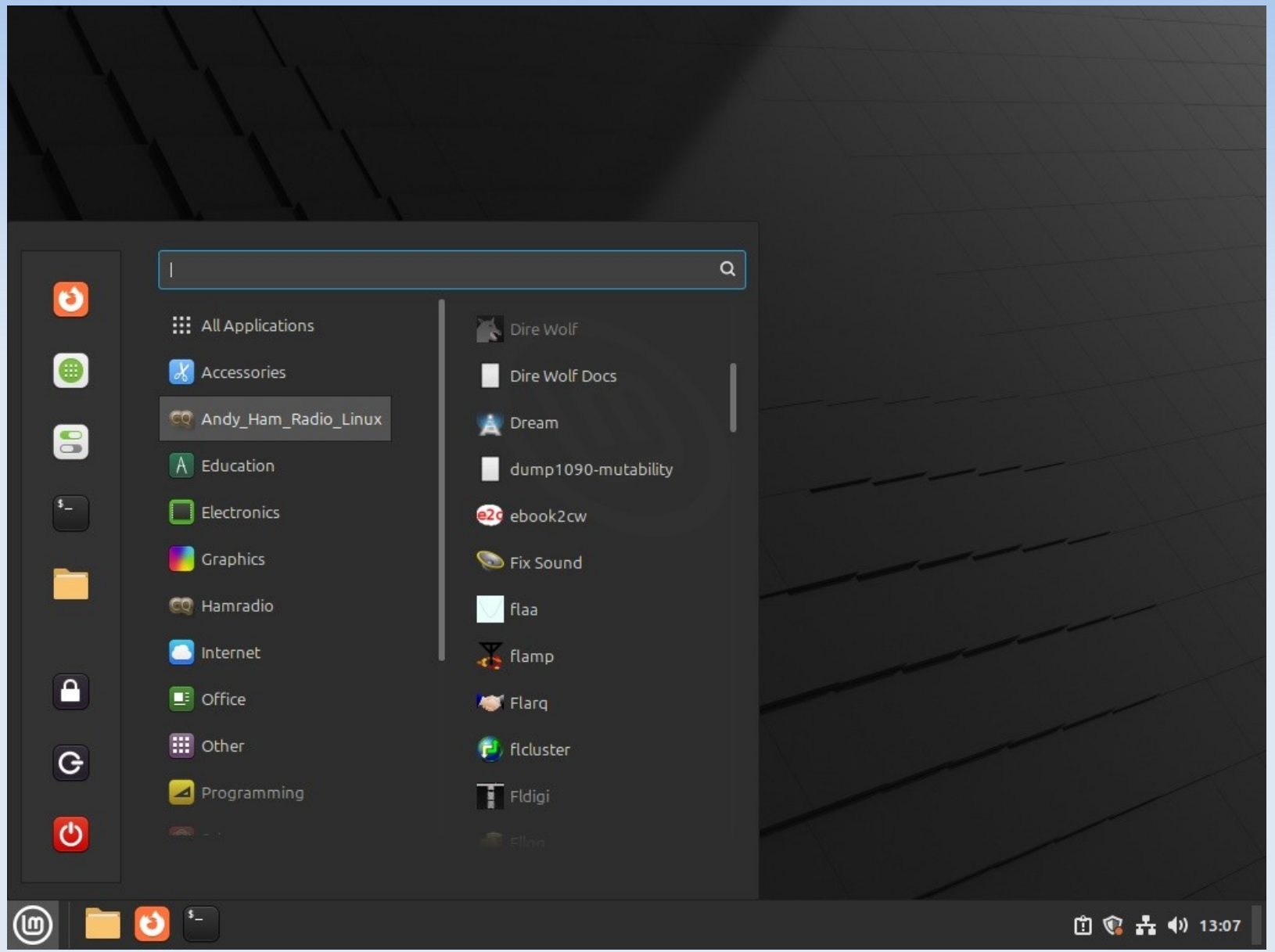
kubuntu

Debian Live 12.7.0
AHRL v26e Menu



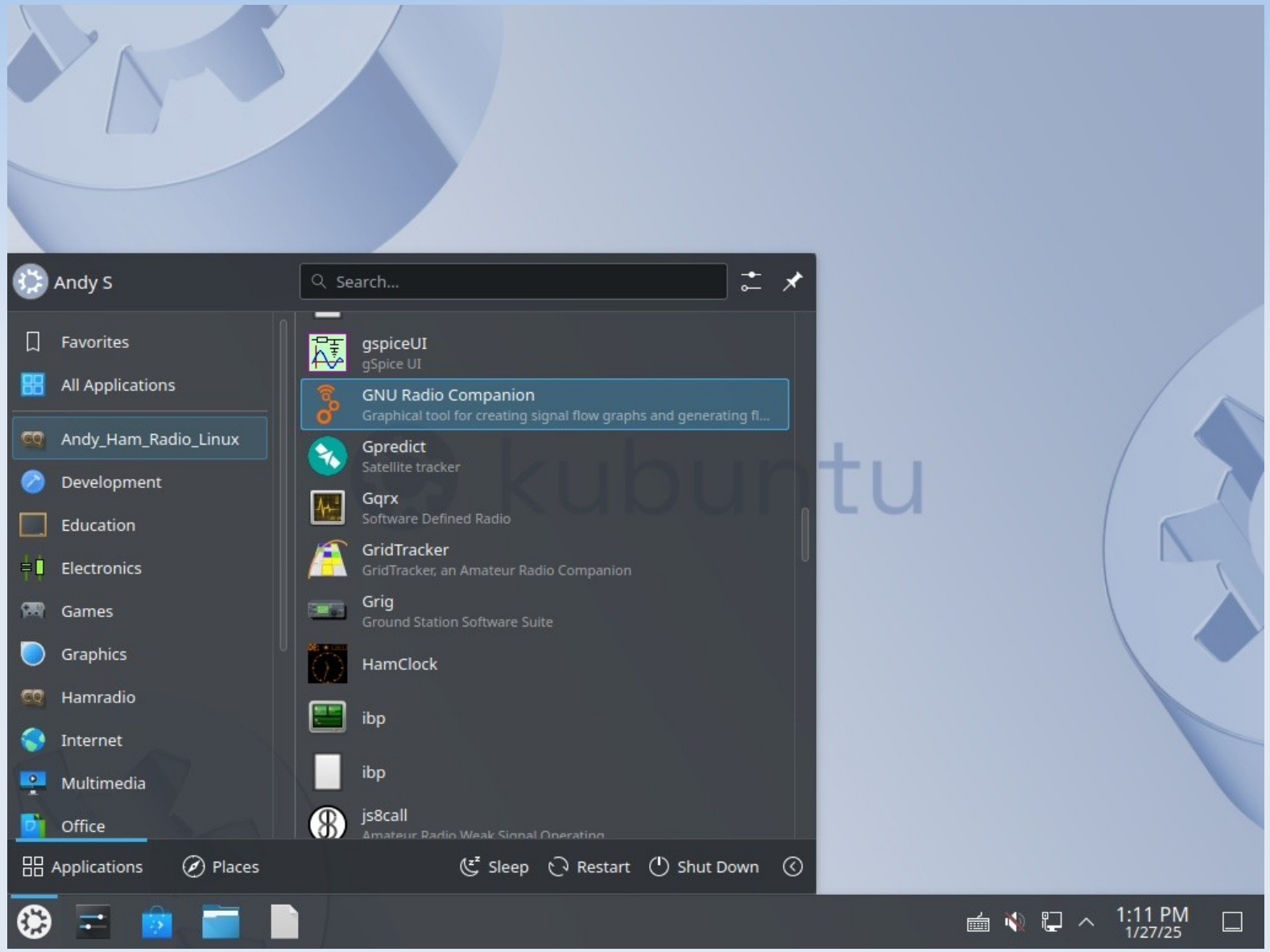
kubuntu

Linux Mint 22 (Cinnamon)
AHRL v26e Menu



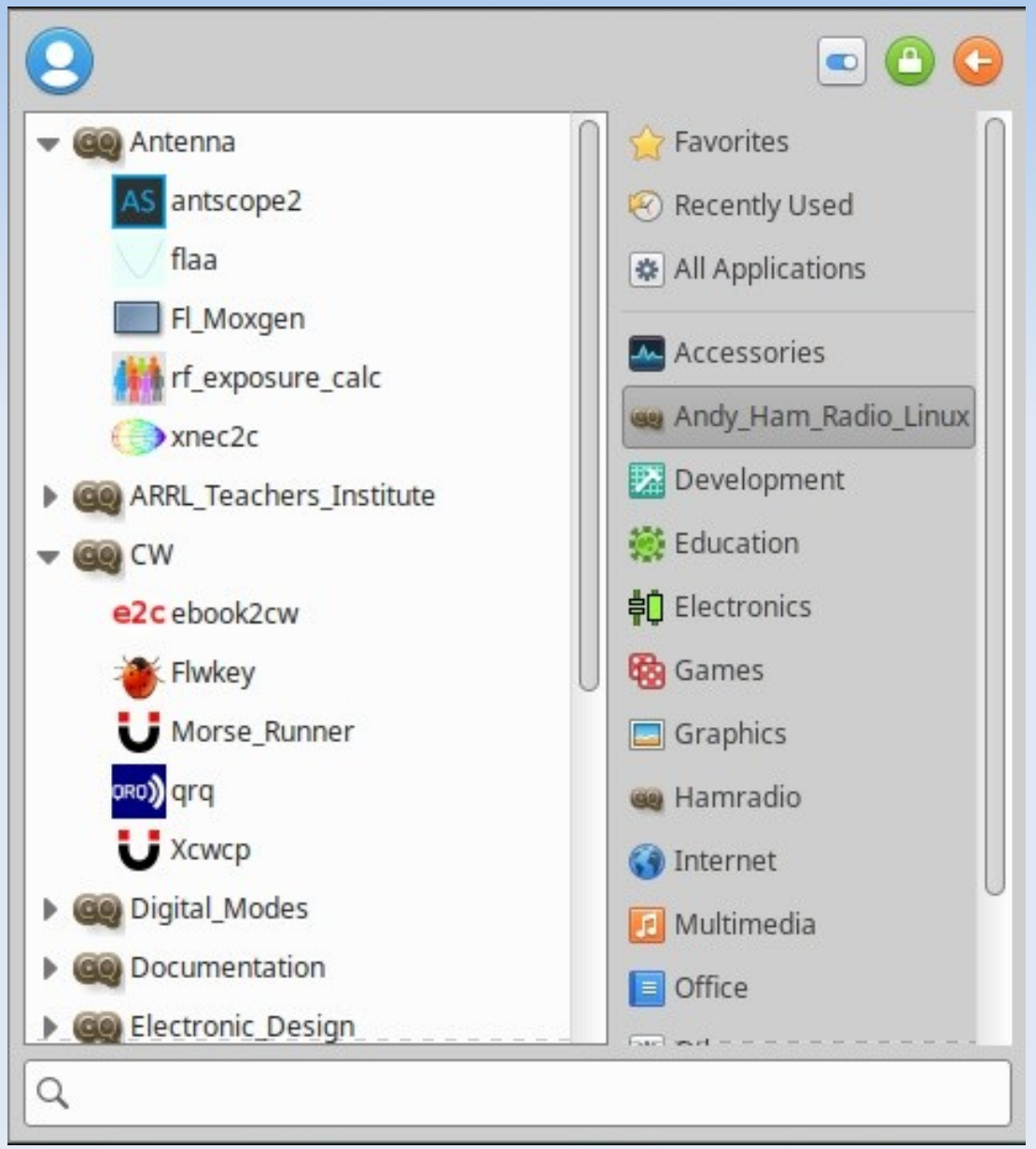
kubuntu

Kubuntu 24.04
AHRL v26e Menu



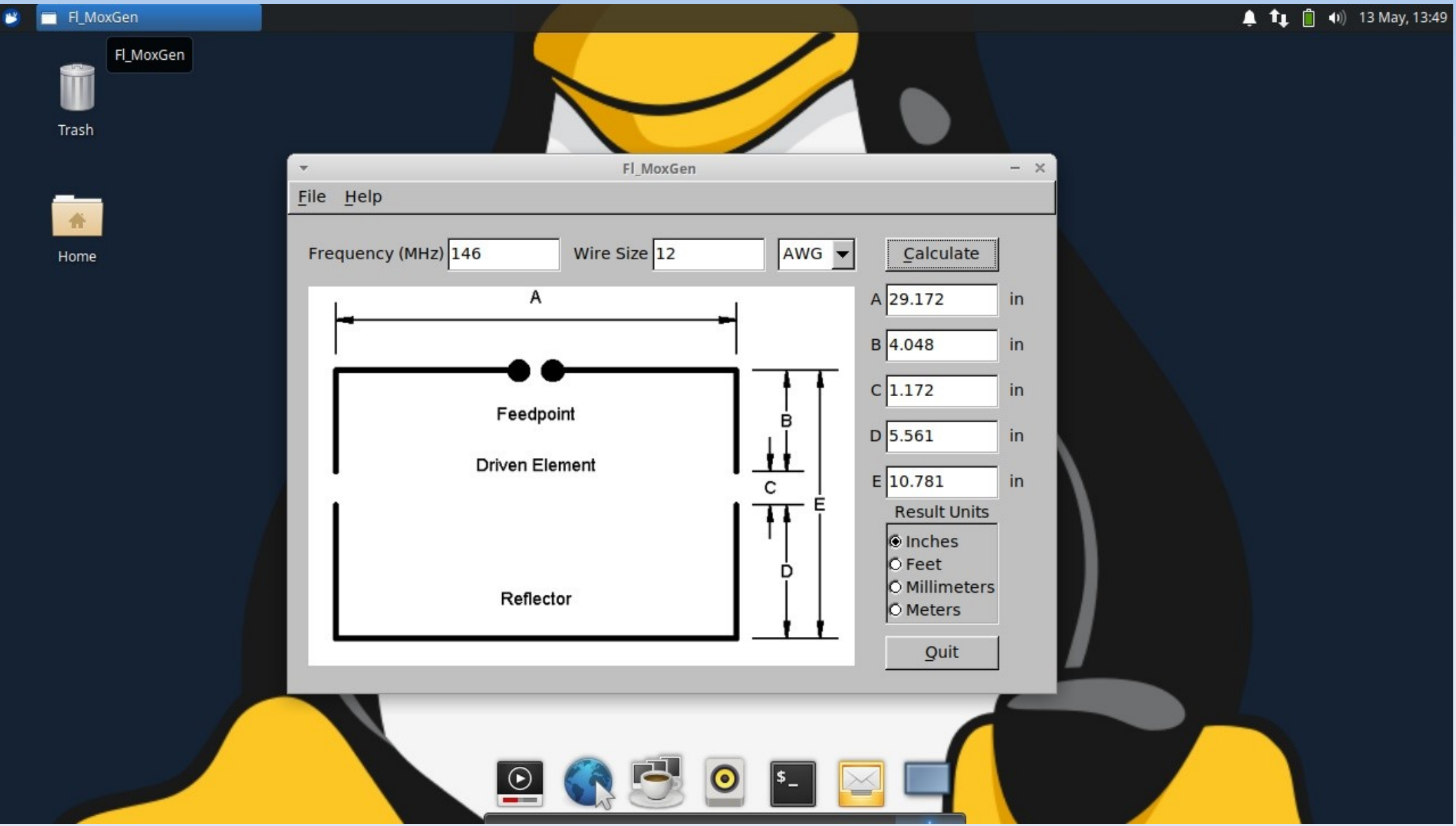
kubuntu

Antenna Menu



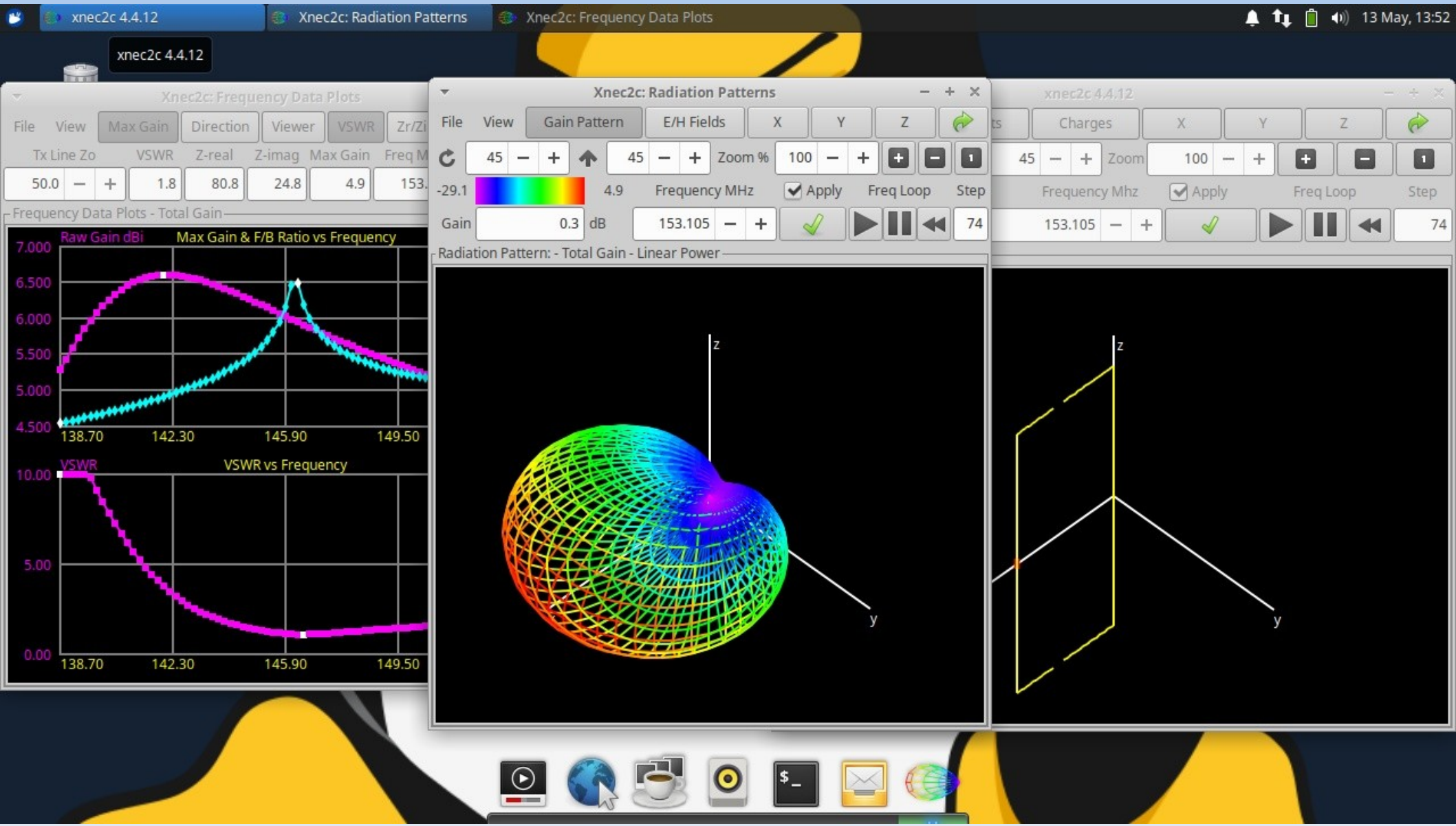
kubuntu

Antennas - Moxon Rectangle



kubuntu

Antenna modeling - xnec2c



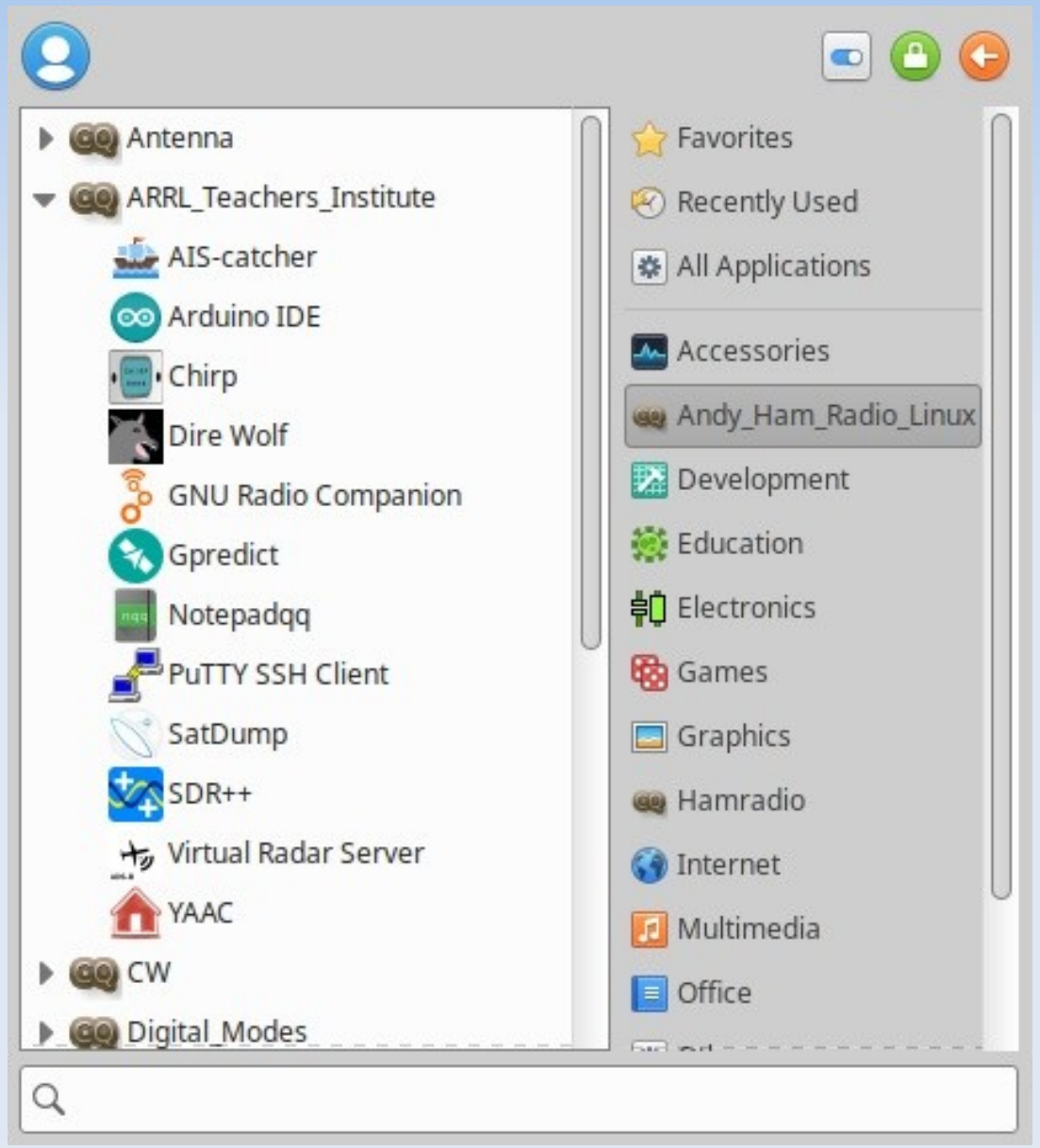
kubuntu

ARRL Teachers Institute

- ARRL is using AHRL !
- Several classes since June 1st, 2025
- Using Raspberry Pi 5
- This has been VERY successful!
- This is GREAT!
  - for ham radio
  - for Linux
  - for AHRL
  - for ARRL
  - for the teachers!

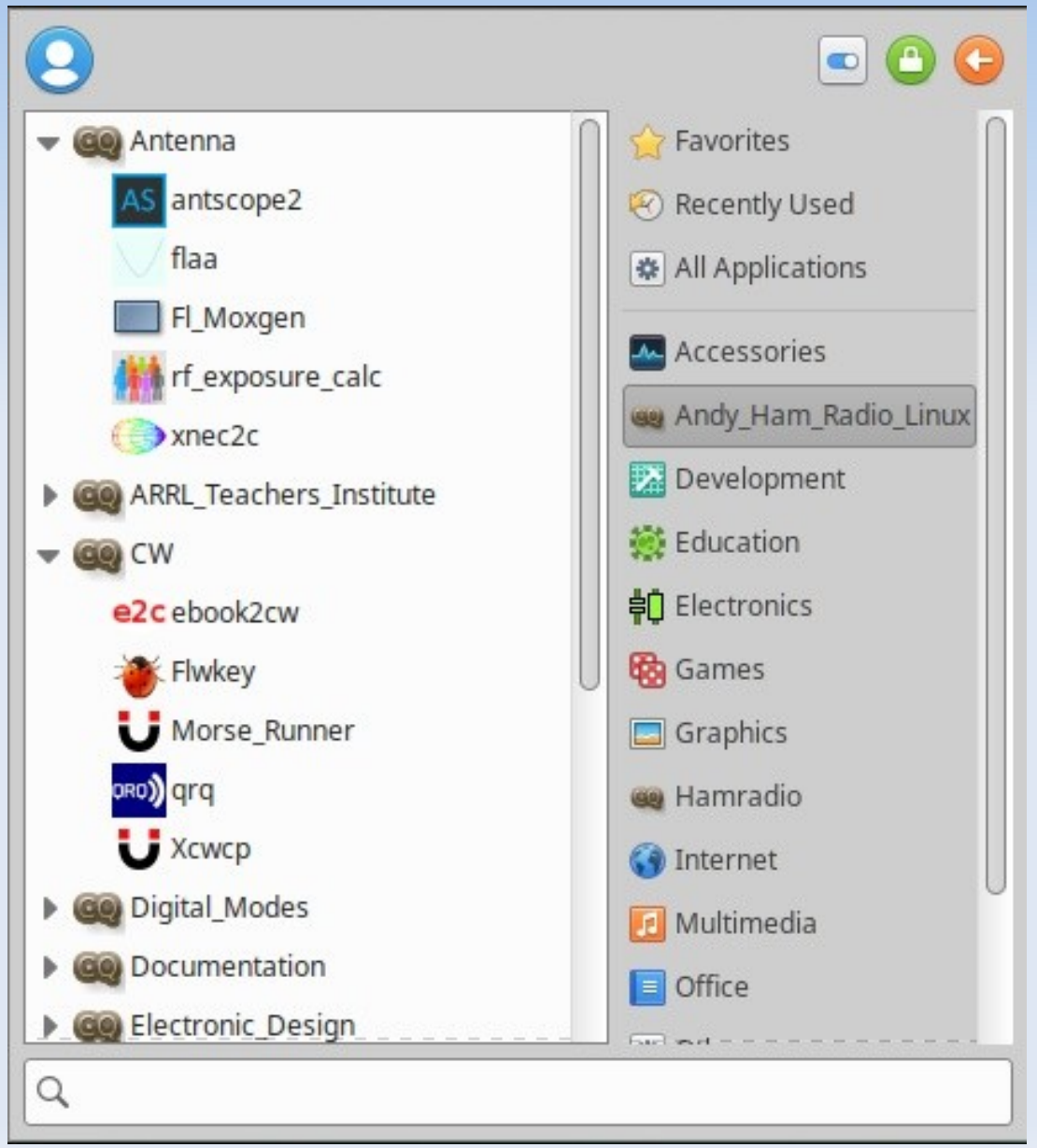
kubuntu

ARRL Teachers Institute Menu



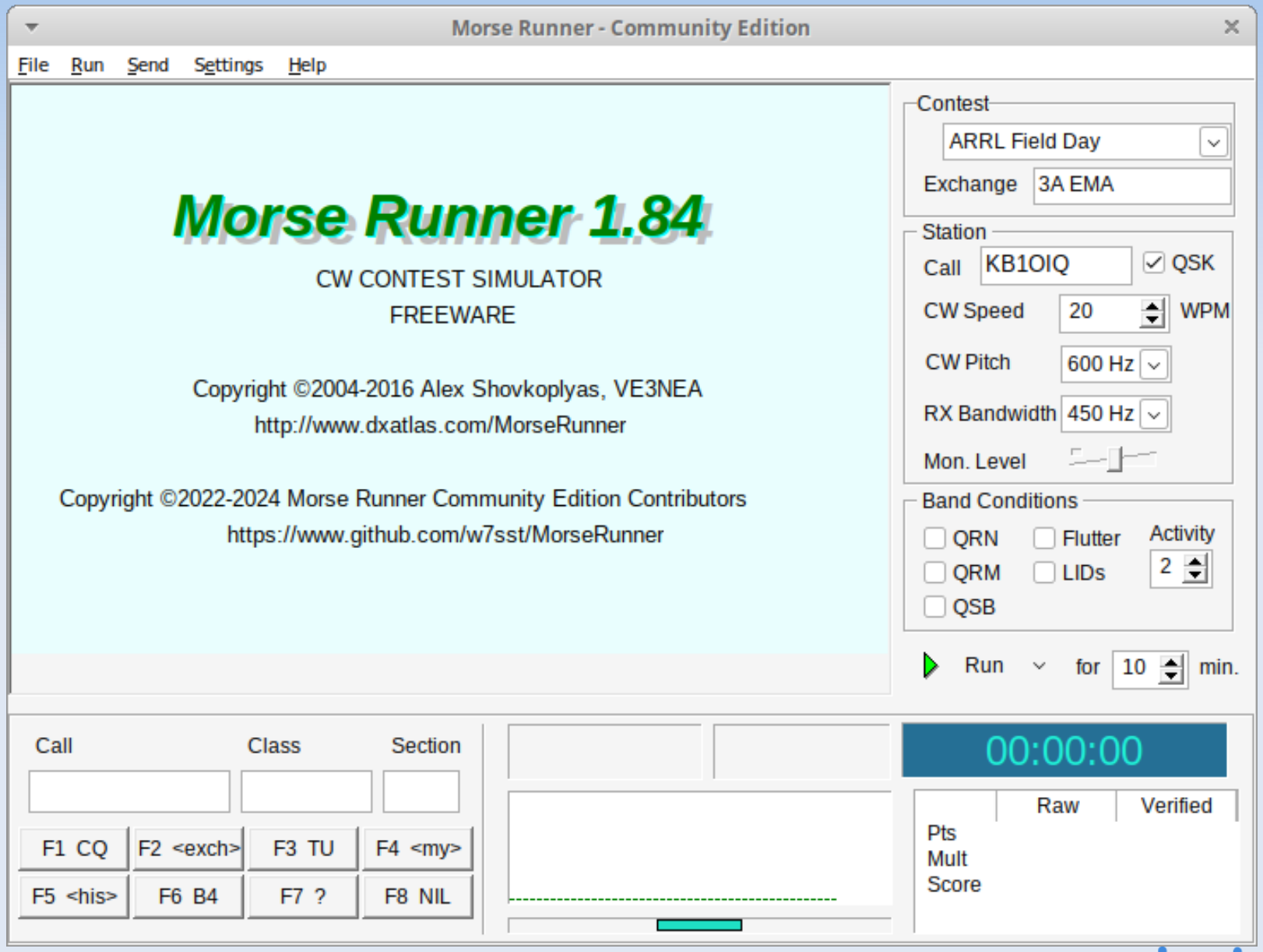
kubuntu

CW Menu



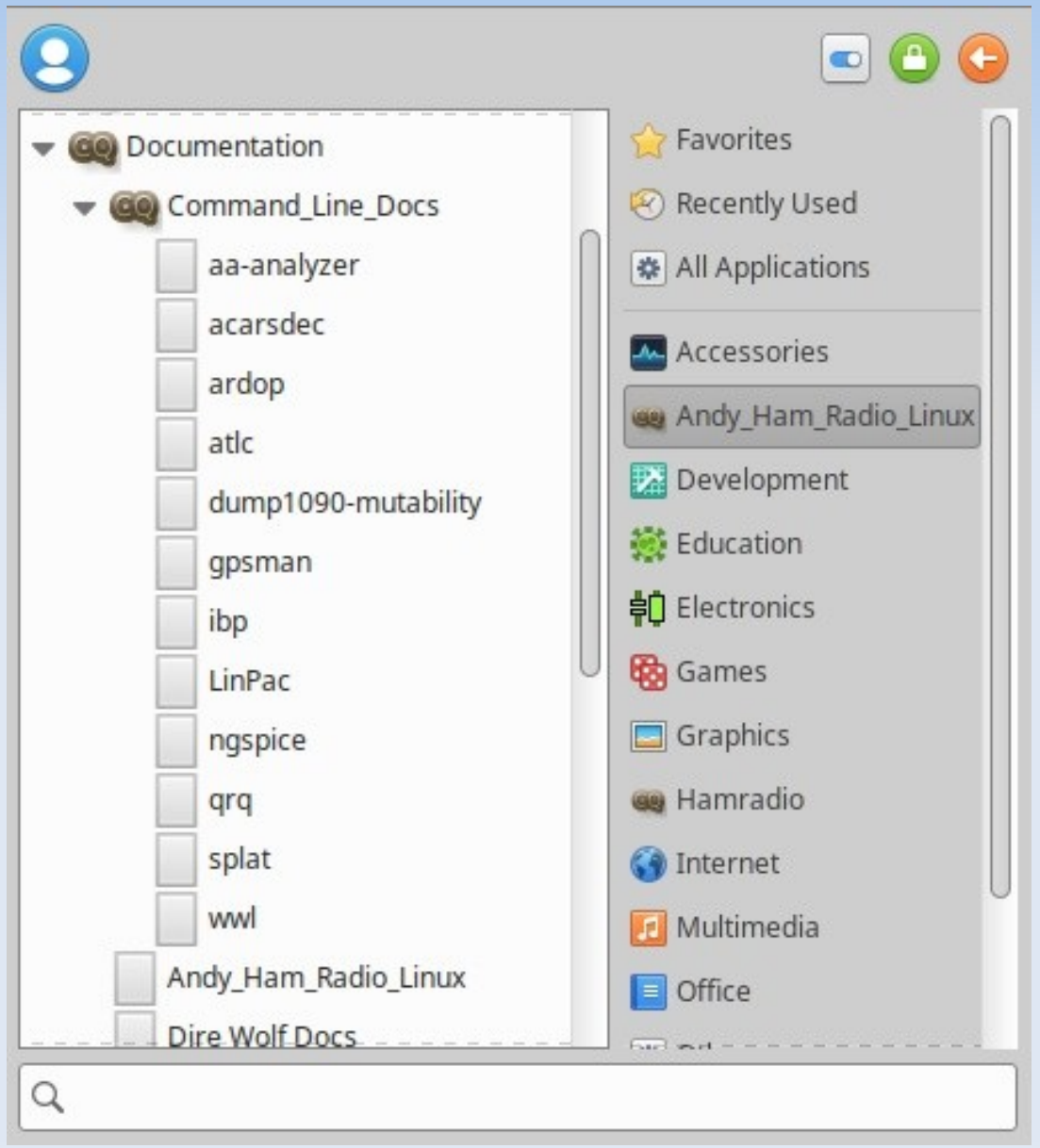
kubuntu

CW - Morse Runner



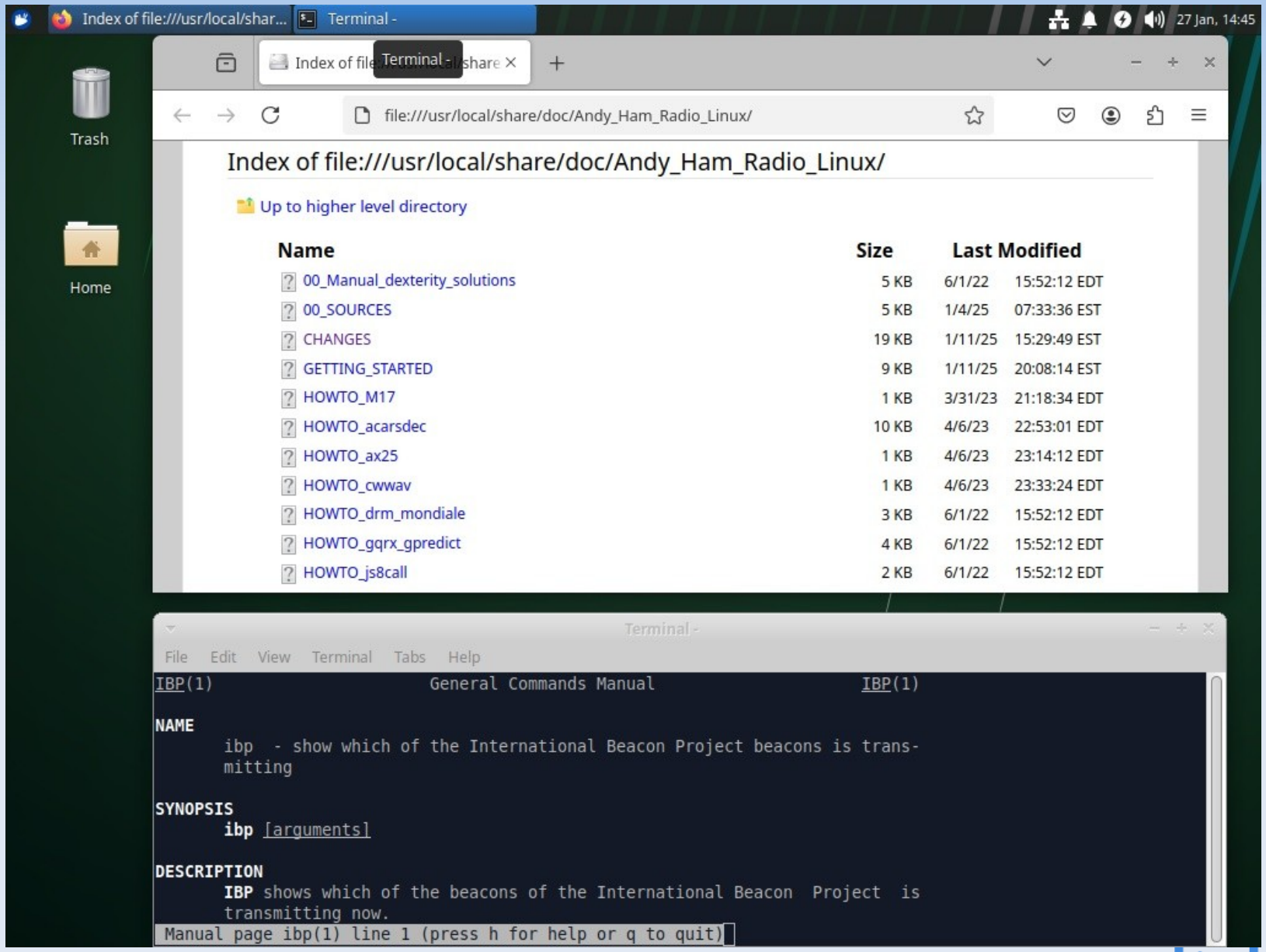
kubuntu

Documentation Menu



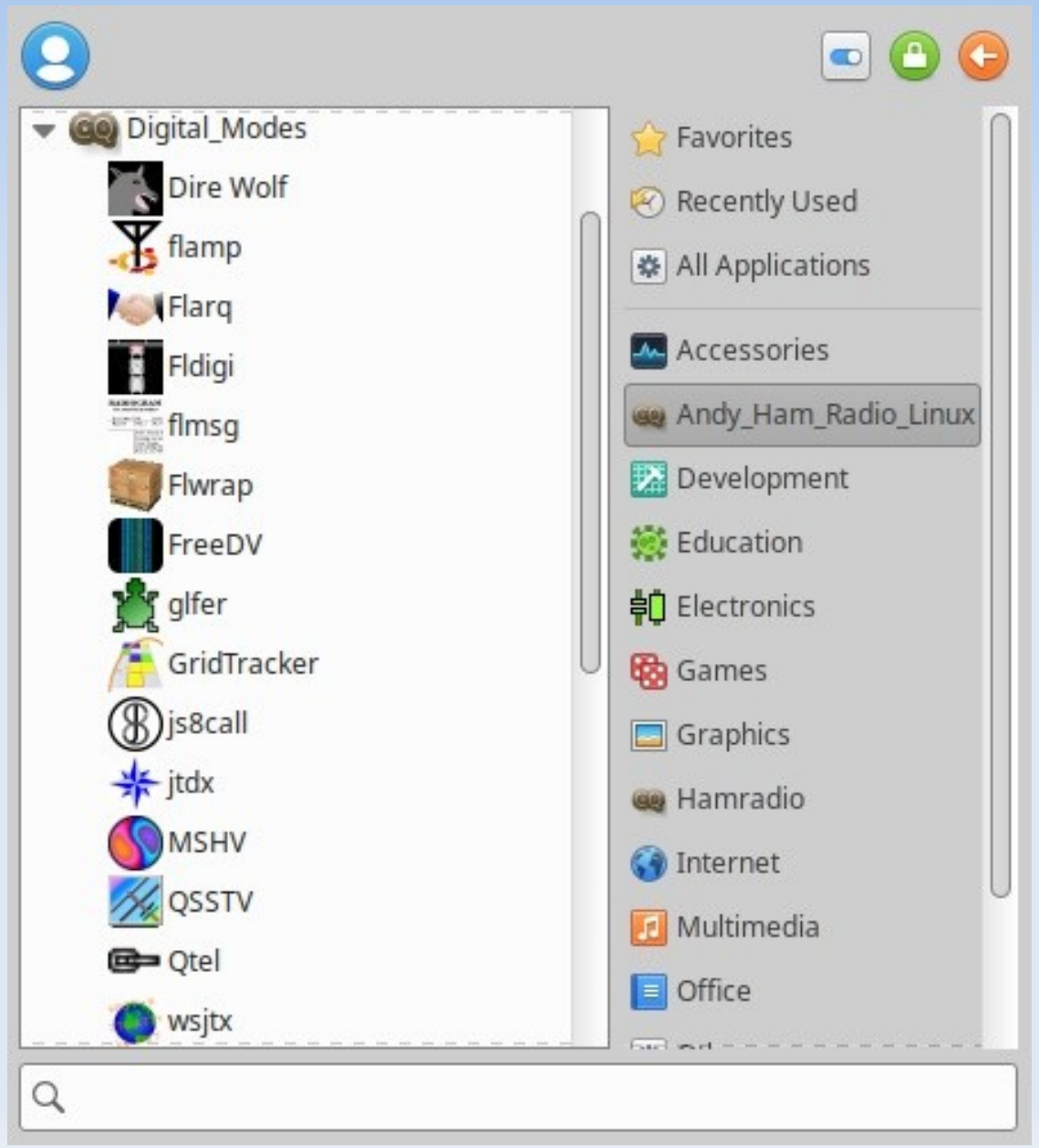
kubuntu

Documentation Examples



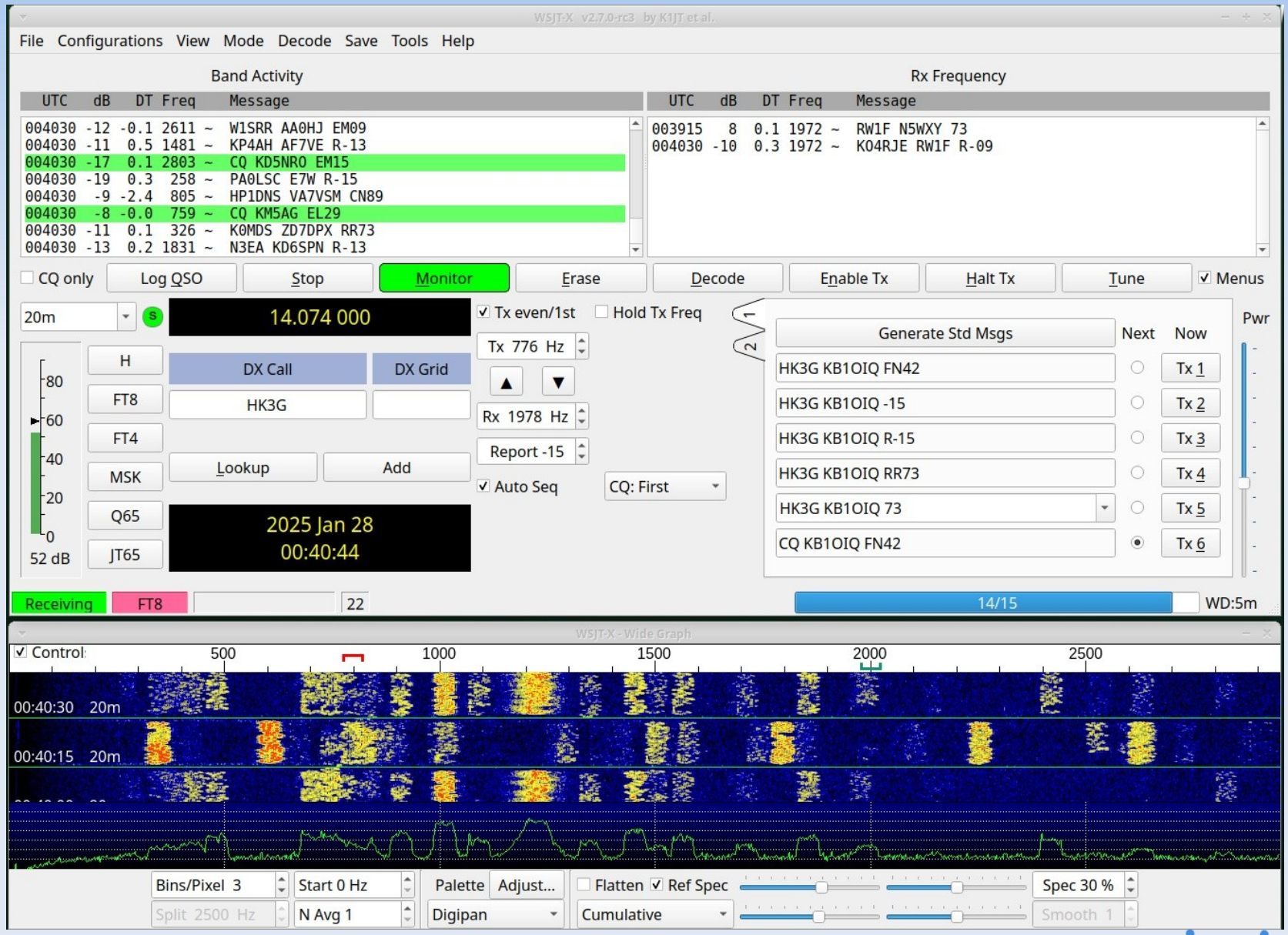
kubuntu

Digital Modes Menu



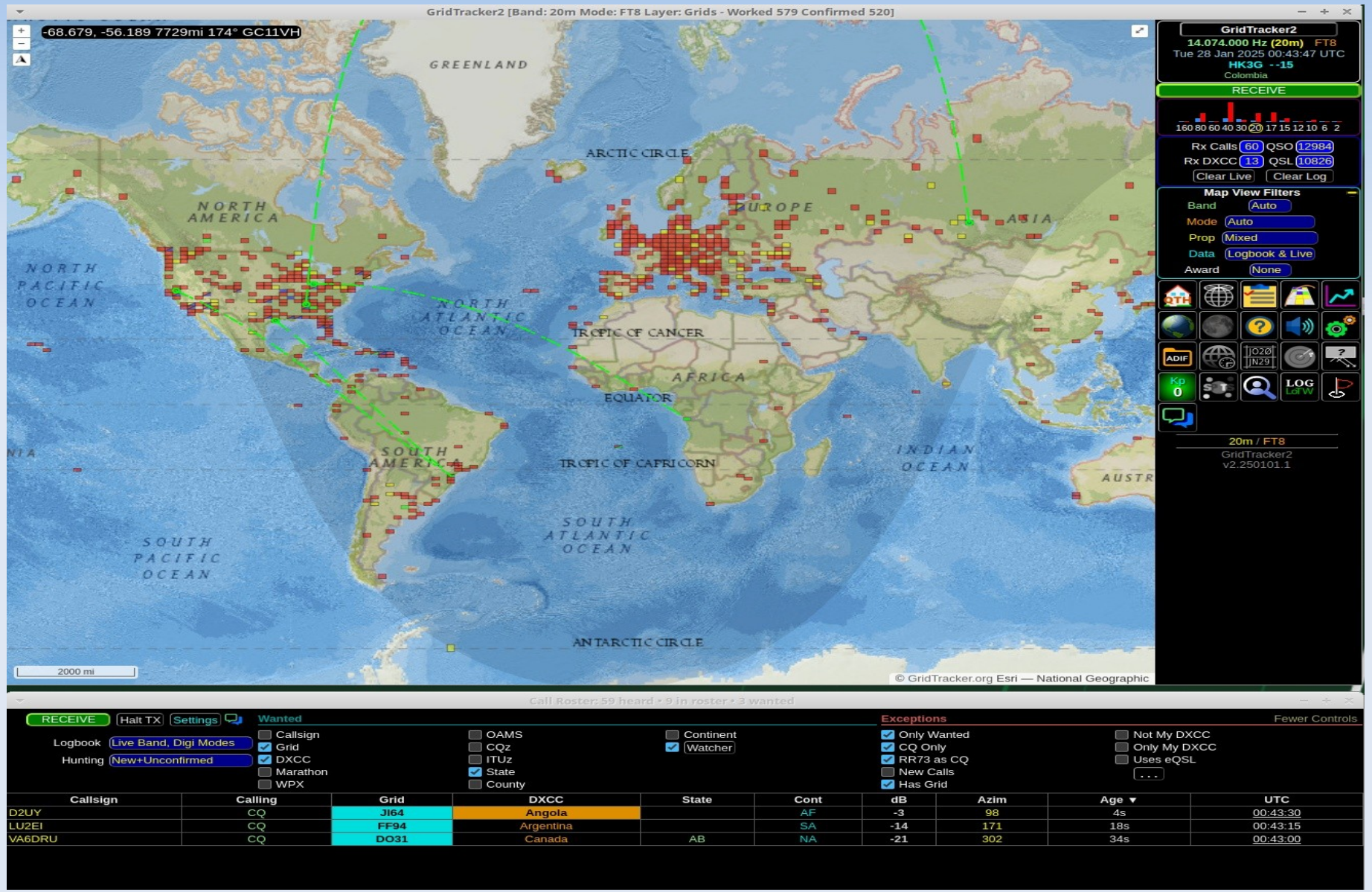
kubuntu

Digital Modes - wsjtx



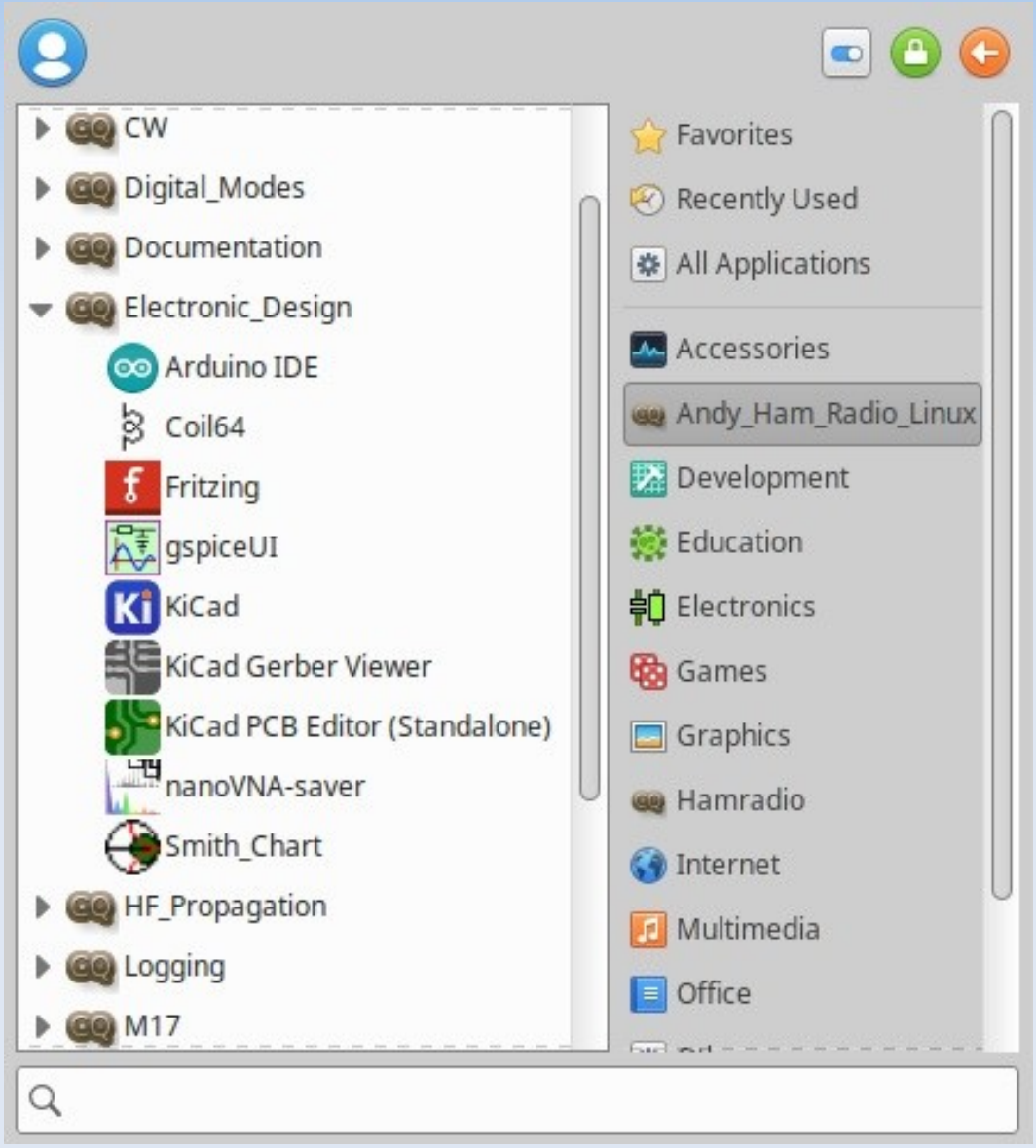
kubuntu

Digital Modes - GridTracker2



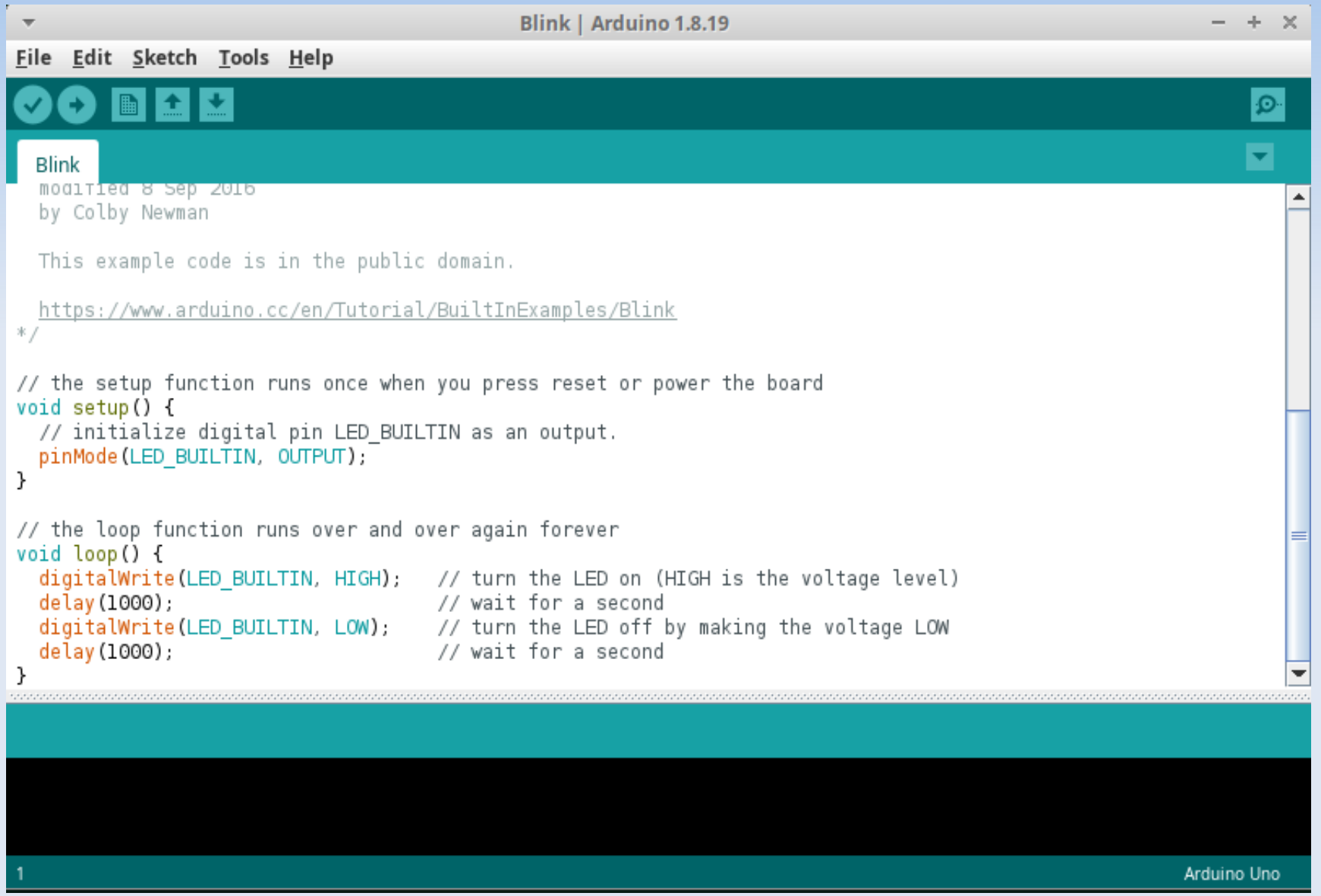
kubuntu

Electronic Design Menu



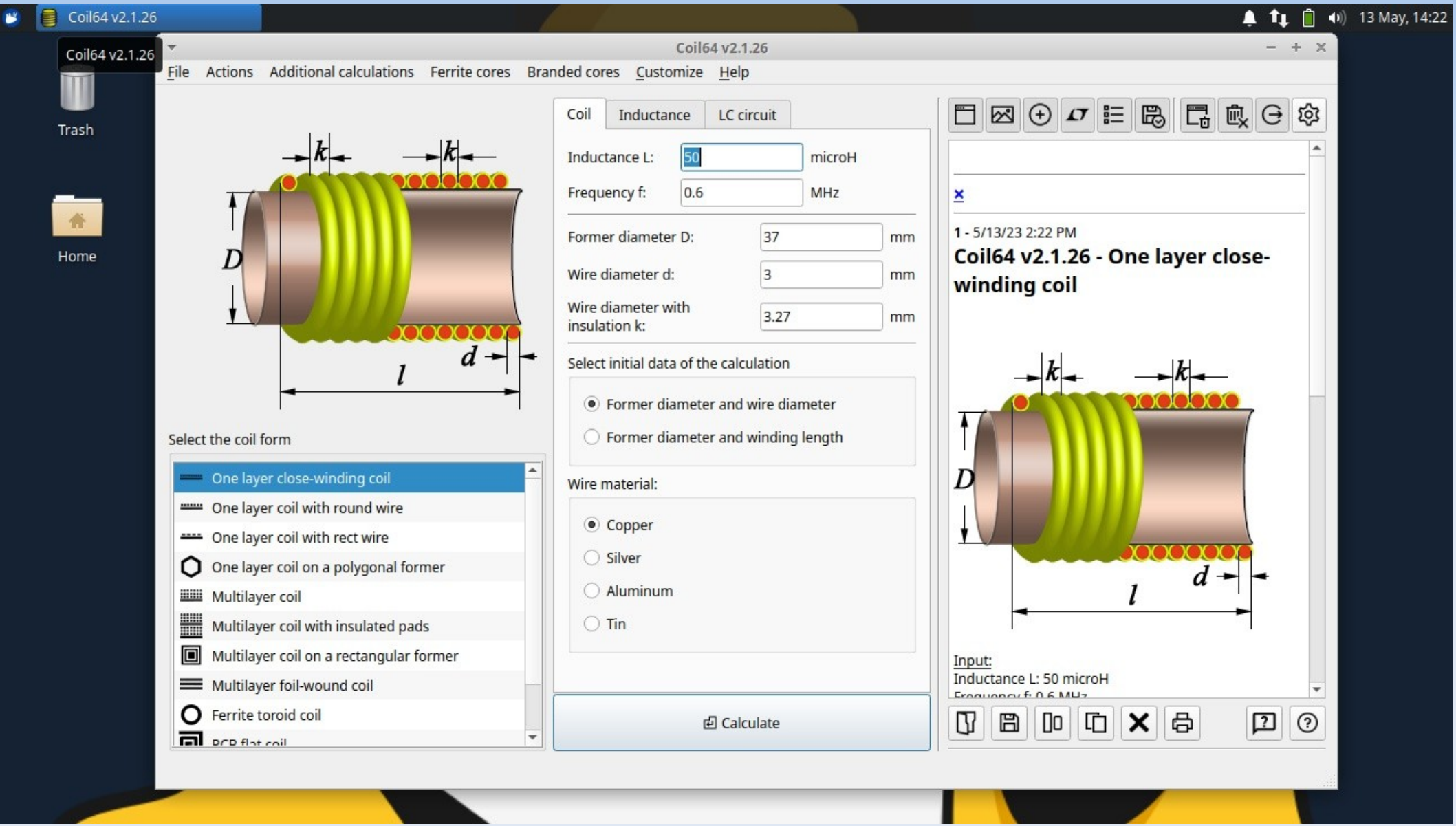
kubuntu

Electronic Design - arduino



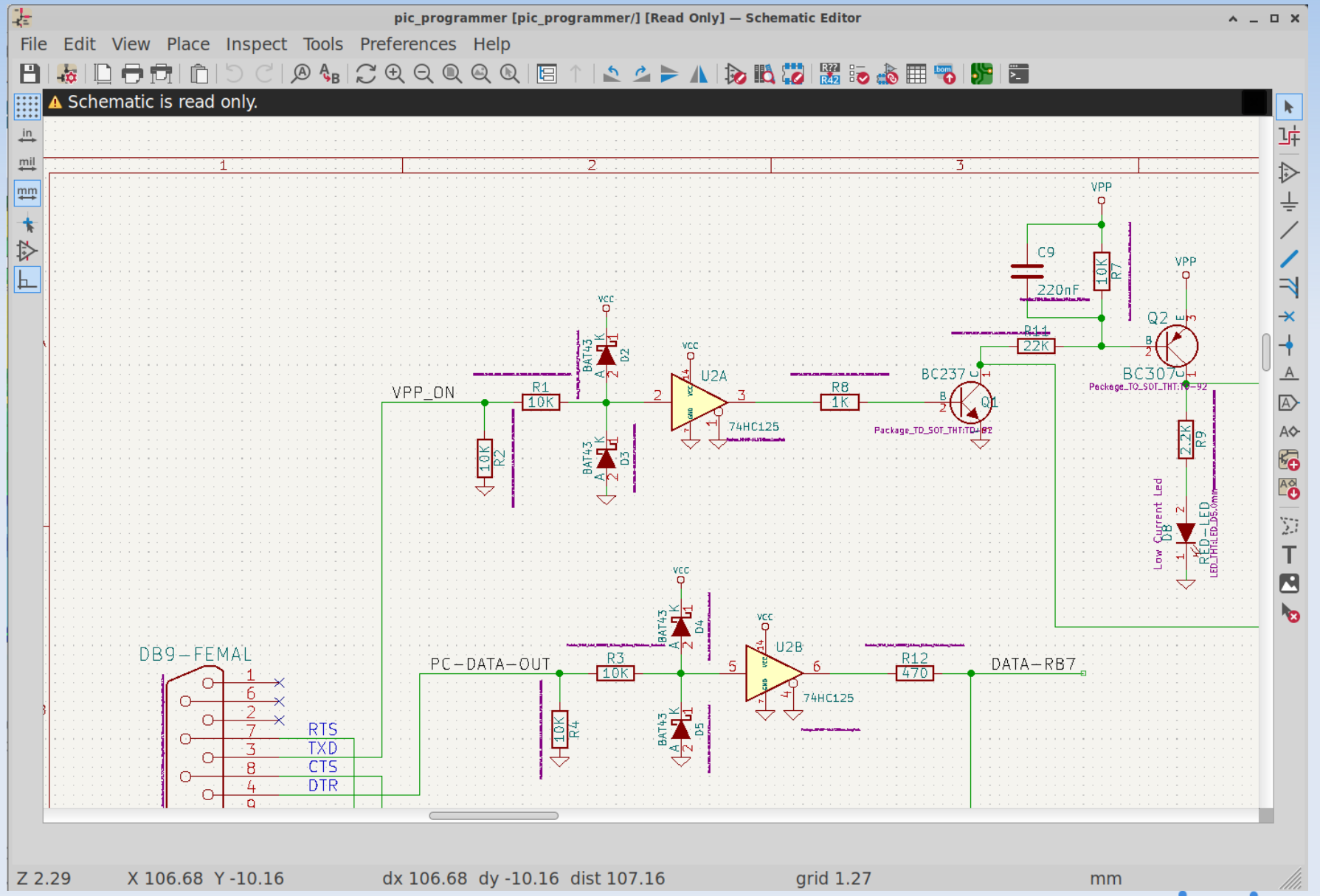
kubuntu

Electronic Design - coil64



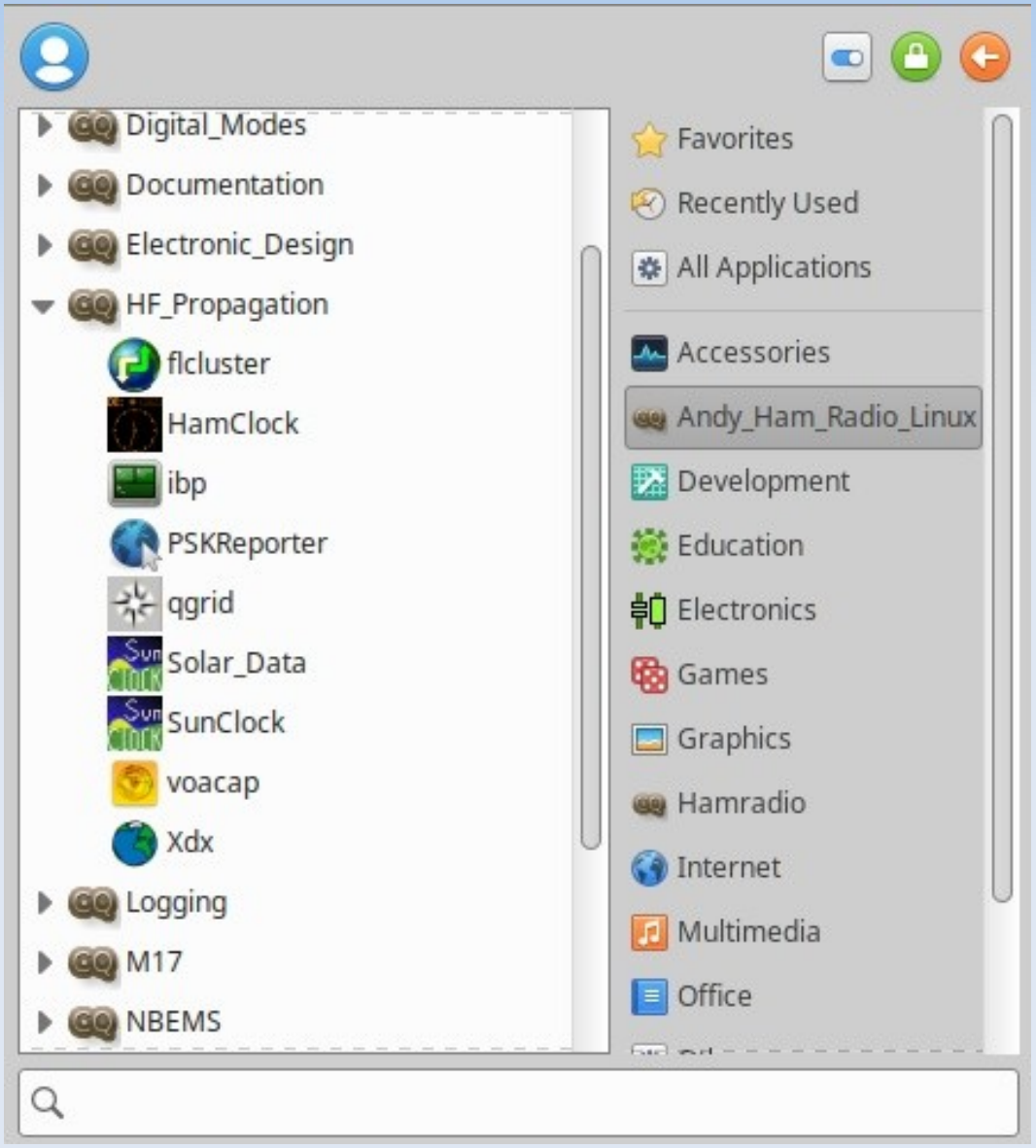
kubuntu

Electronic Design - kicad



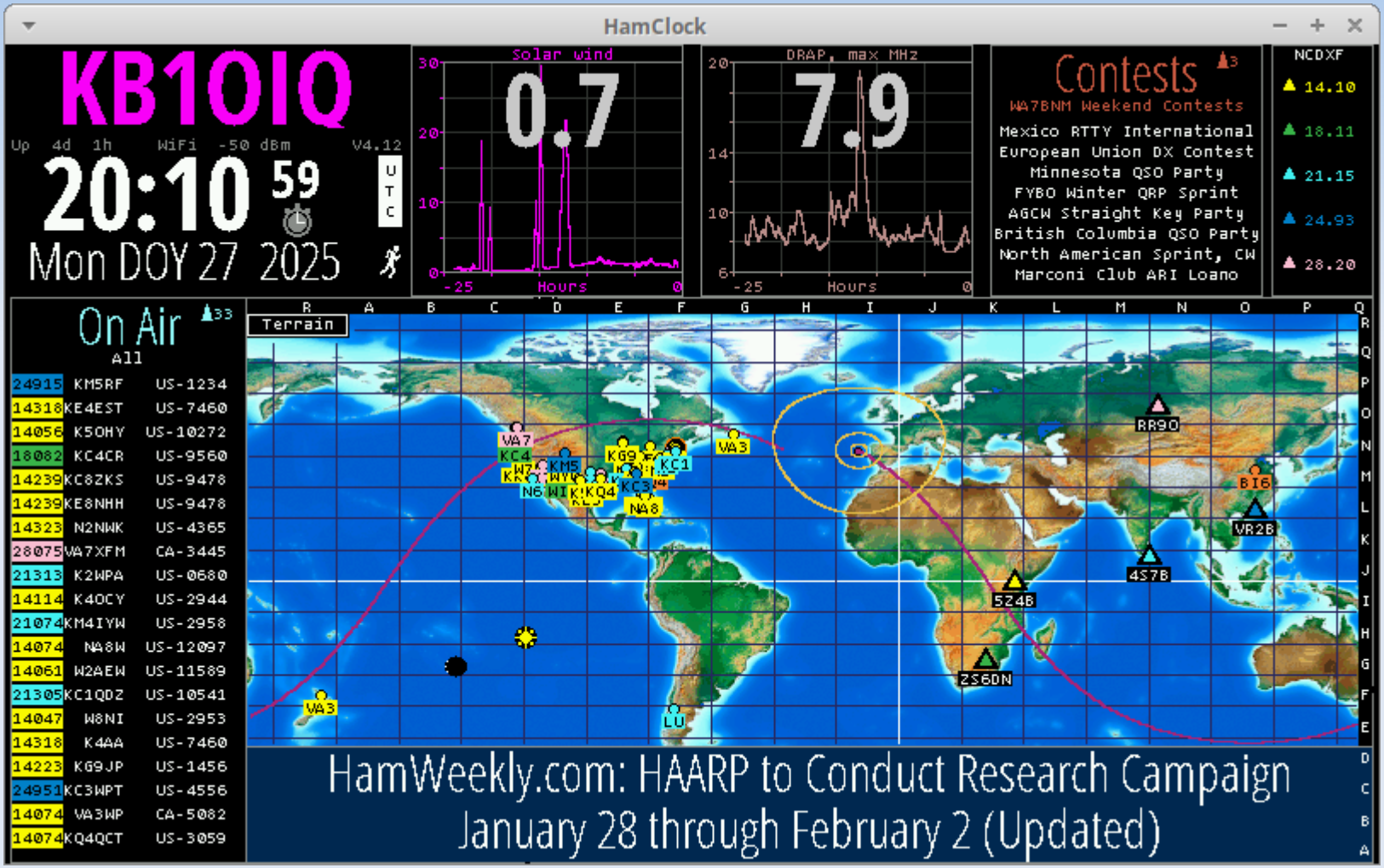
kubuntu

HF Propagation Menu



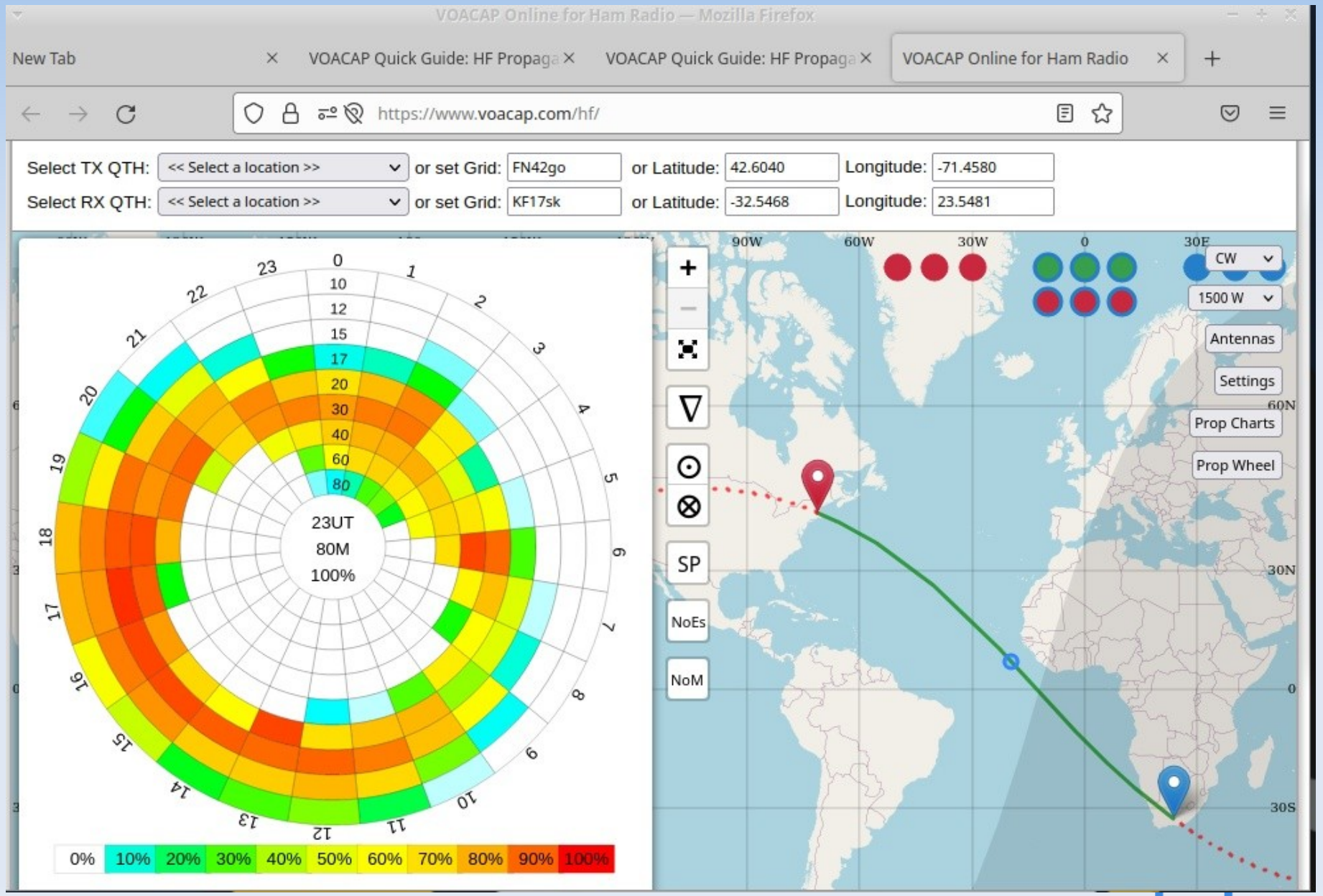
kubuntu

HF Propagation - HamClock



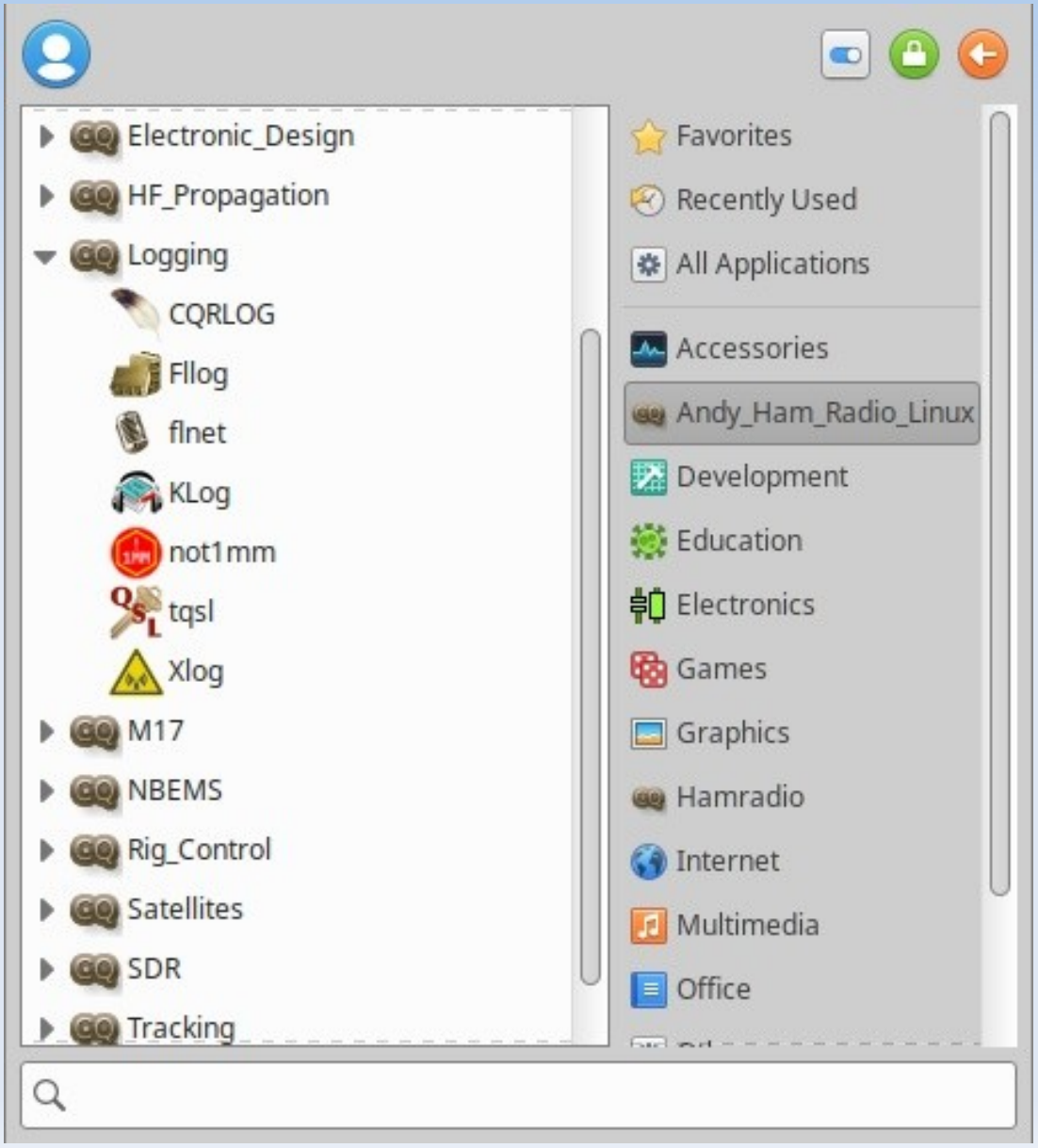
kubuntu

HF Propagation VOACAP



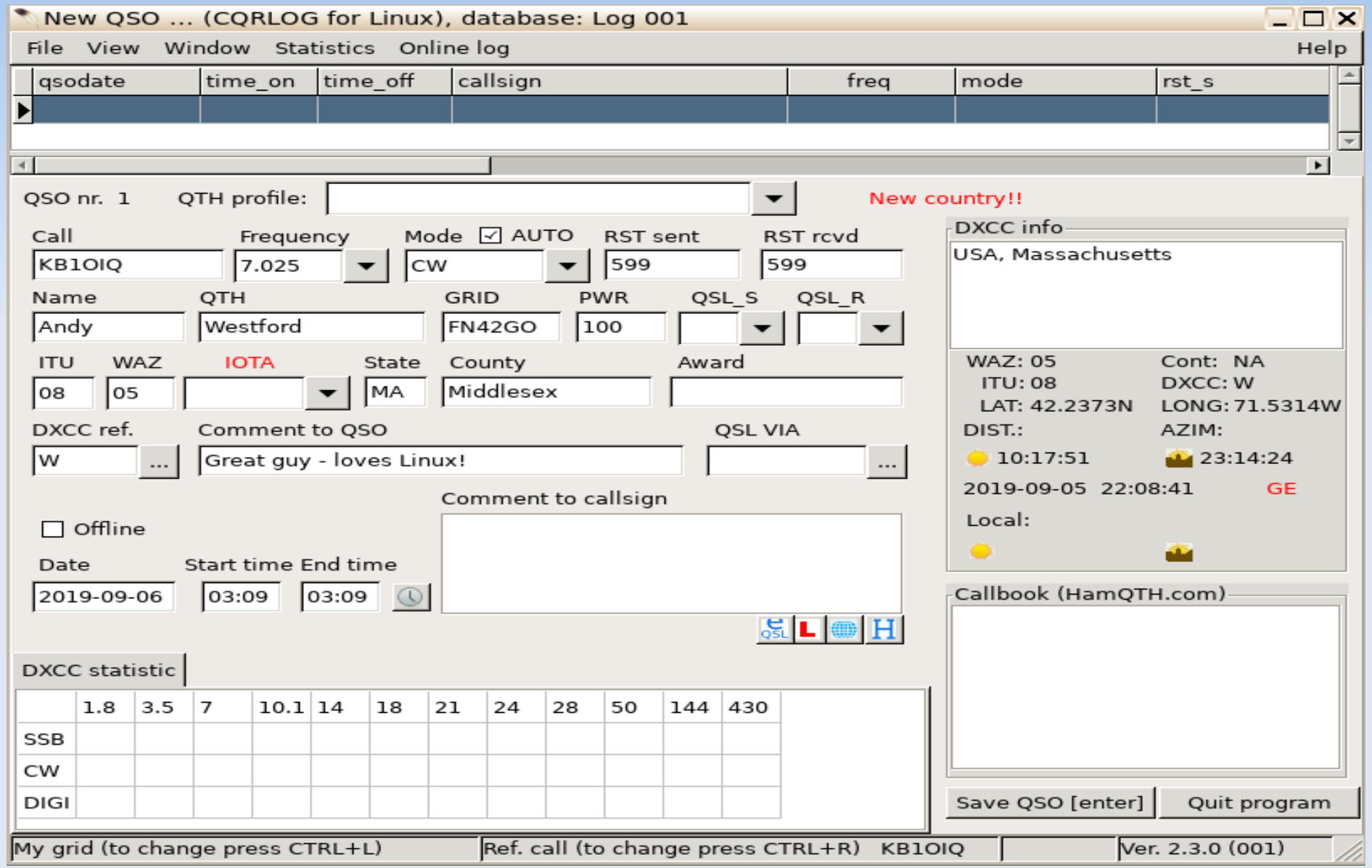
kubuntu

Logging Menu



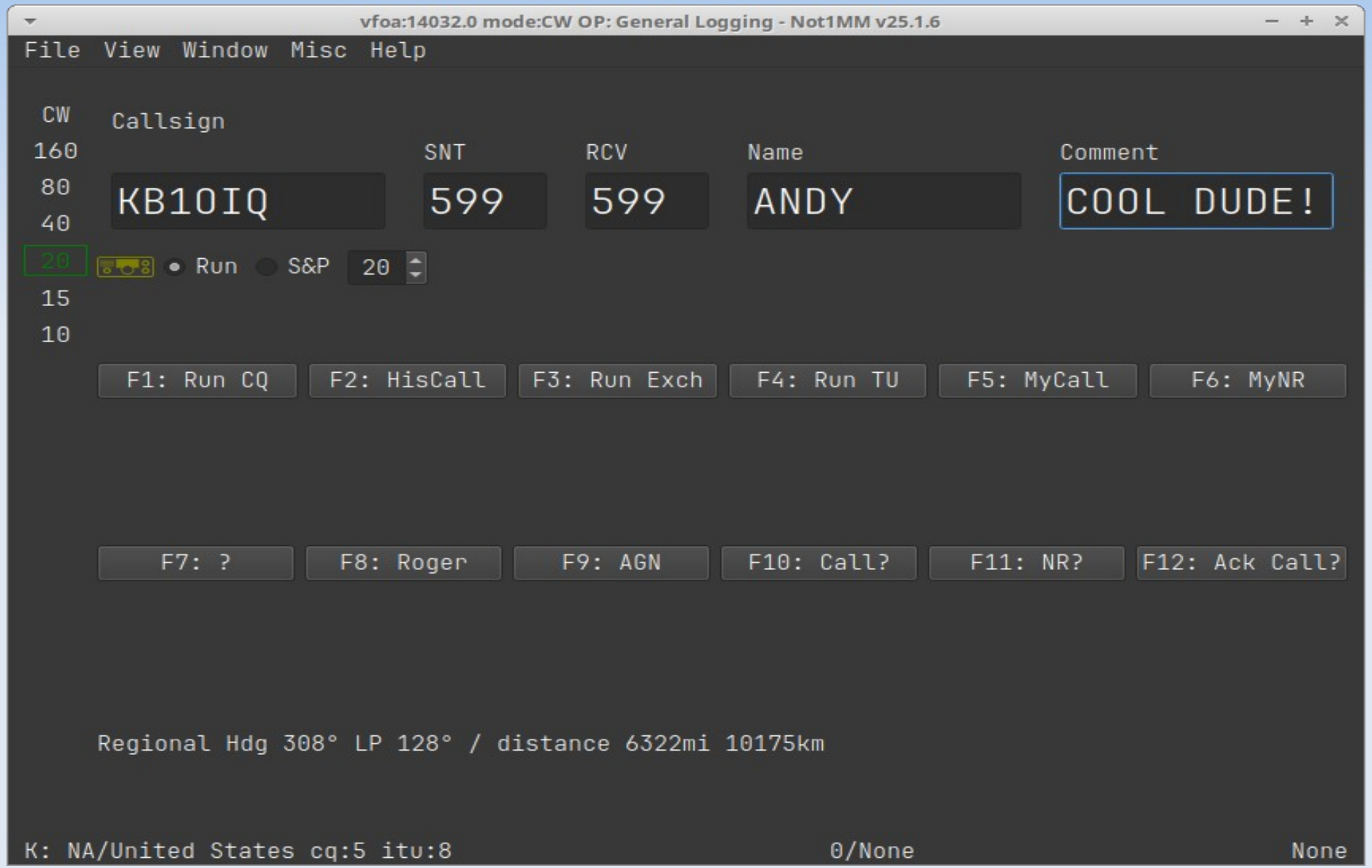
kubuntu

Logging - CQRLOG



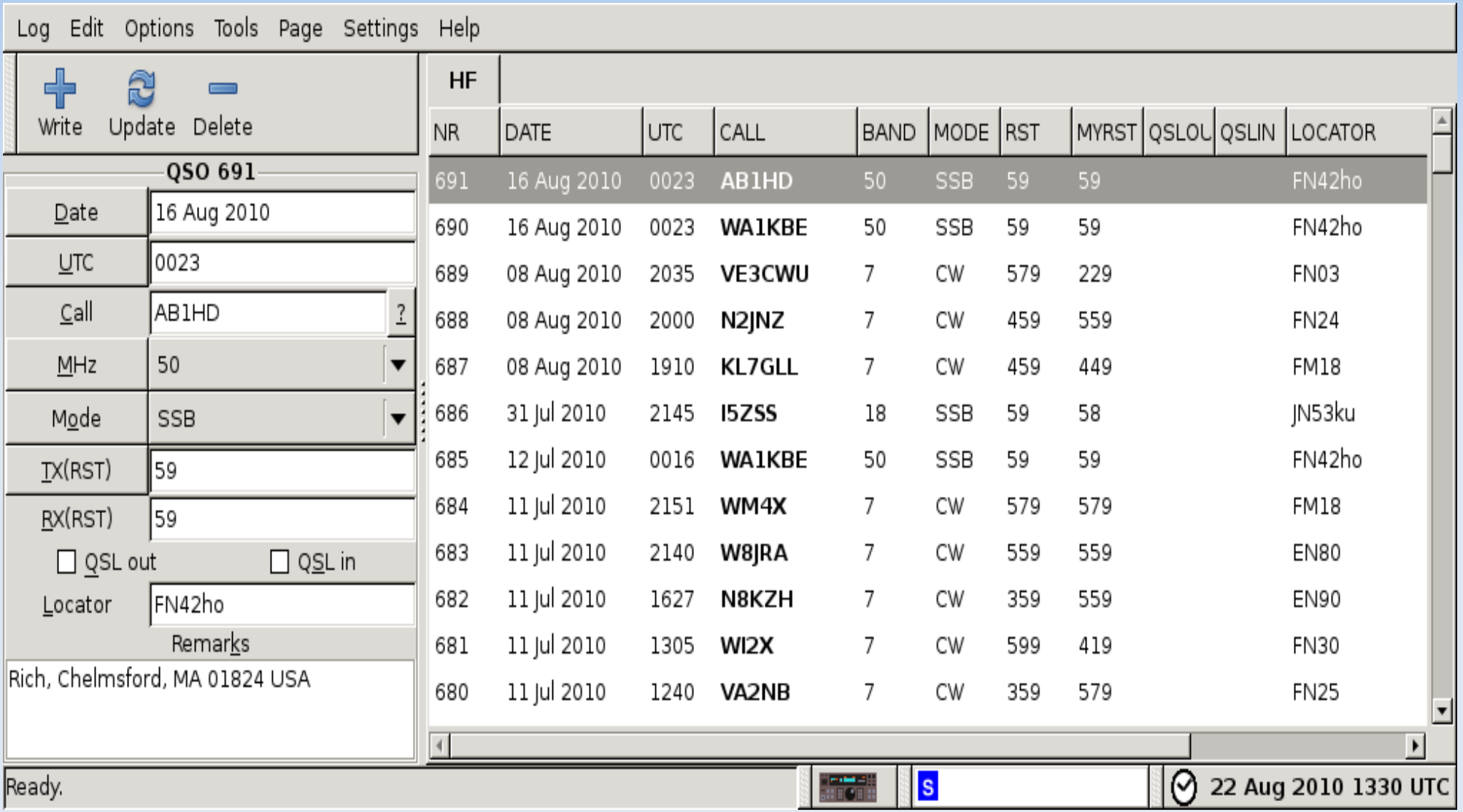
kubuntu

Logging - not1mm



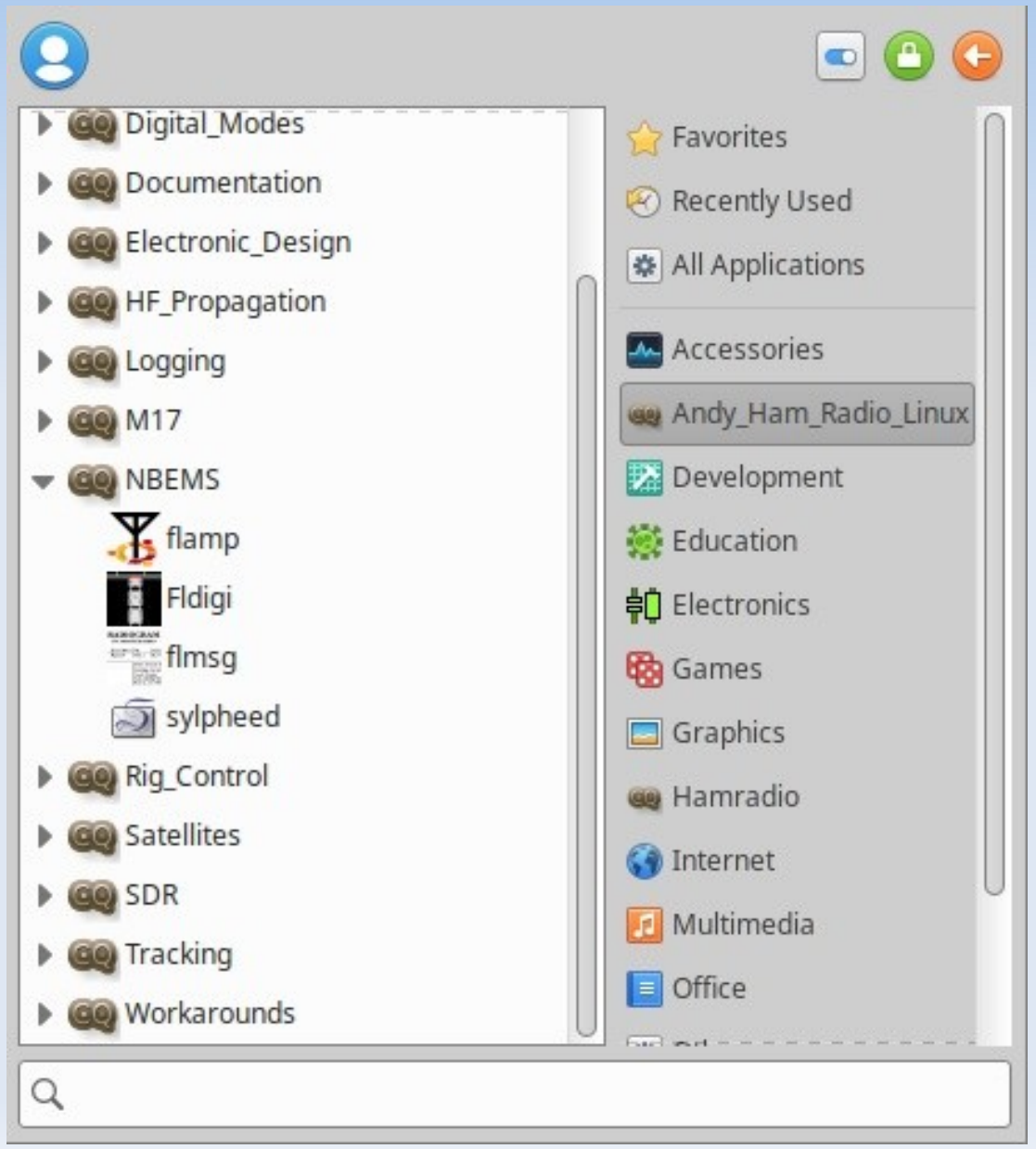
kubuntu

Logging - Xlog



kubuntu

NBEMS Menu

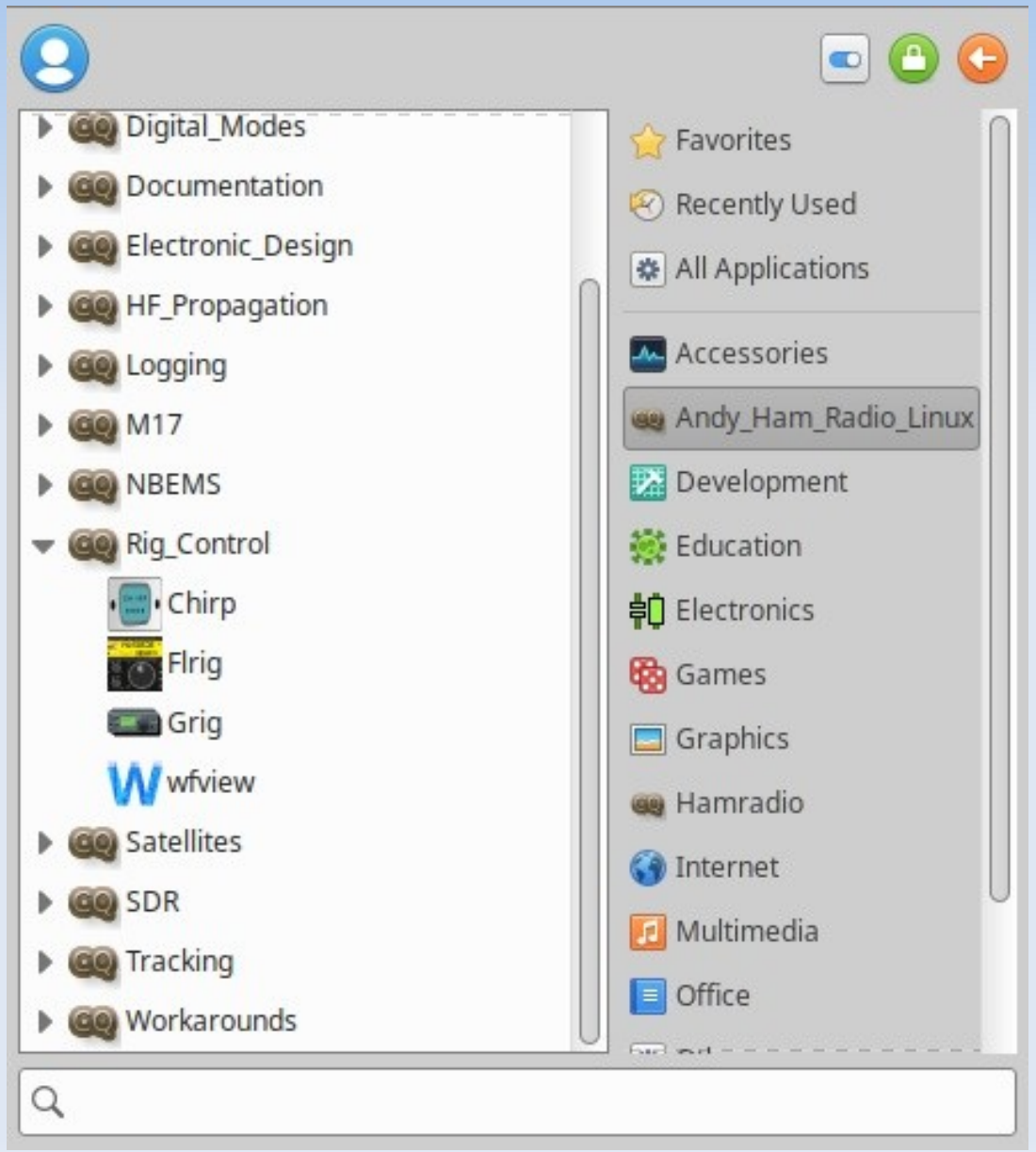


kubuntu

NBEMS

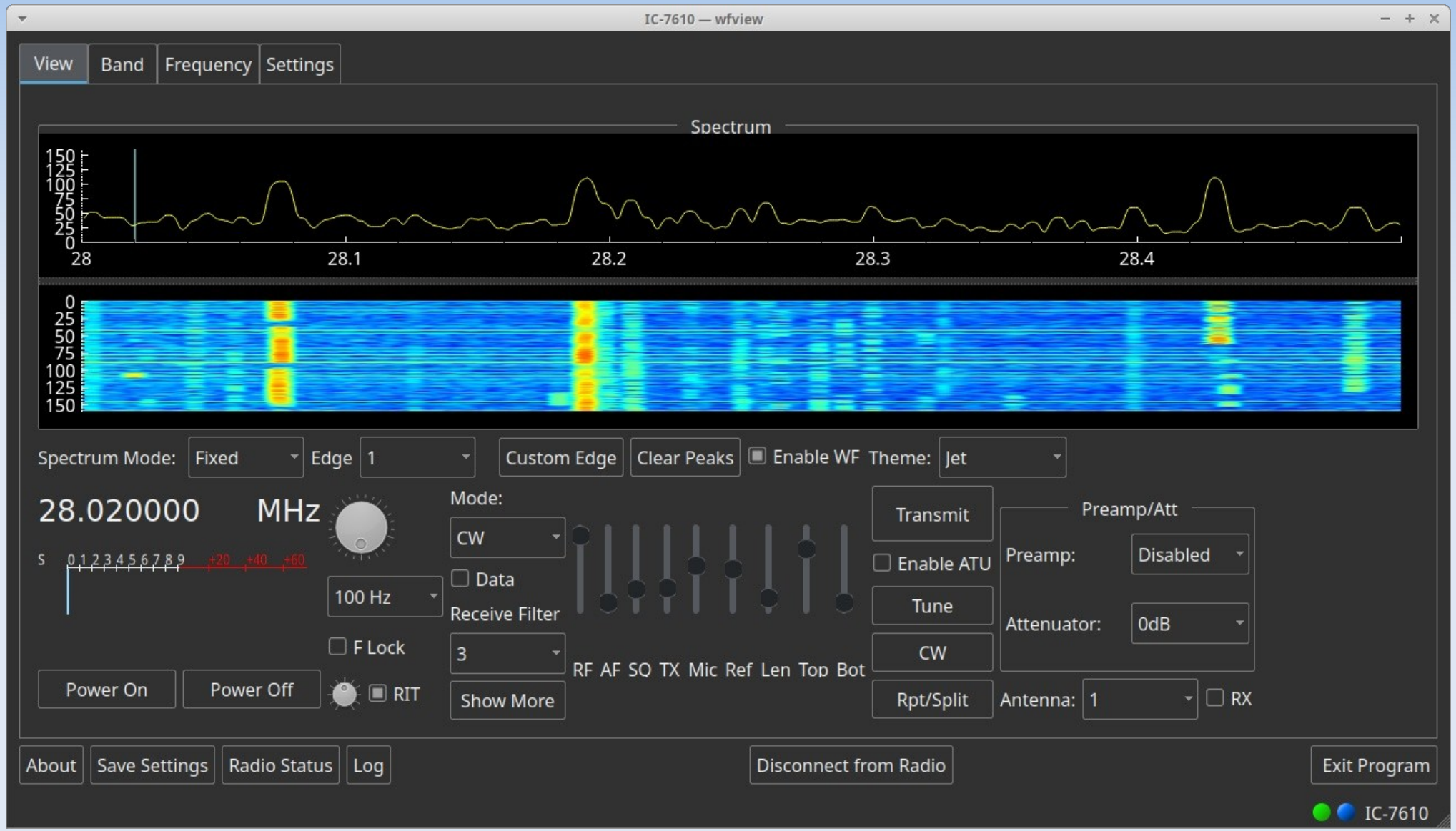
- Narrow Band Emergency Messaging System
- Open Source software suite
- Runs on the 3 major operating systems
- No infrastructure required
- Used by EMCOMM folks
- Ties in with sylpheed email program

Rig Control Menu



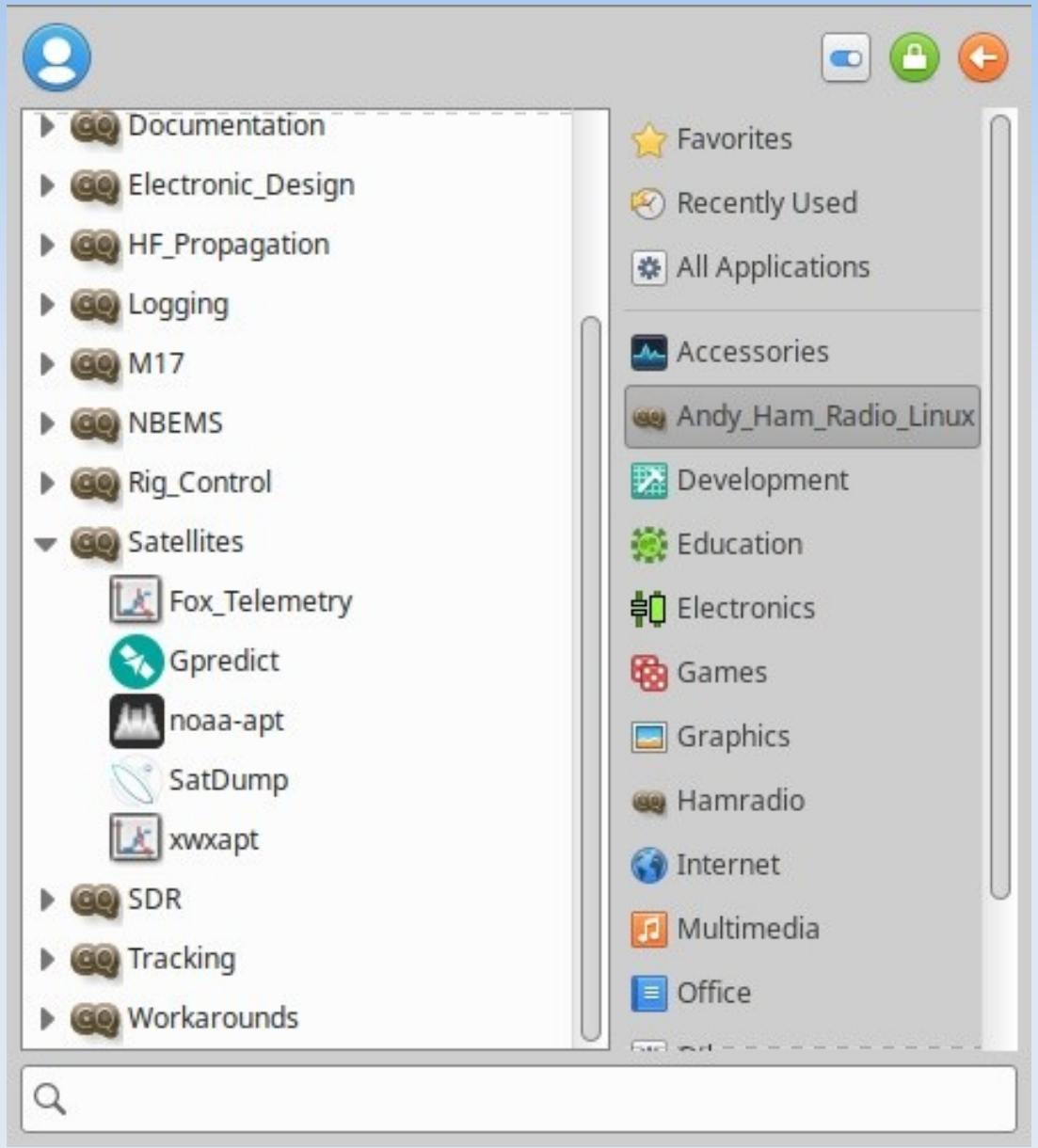
kubuntu

Rig Control - wfview



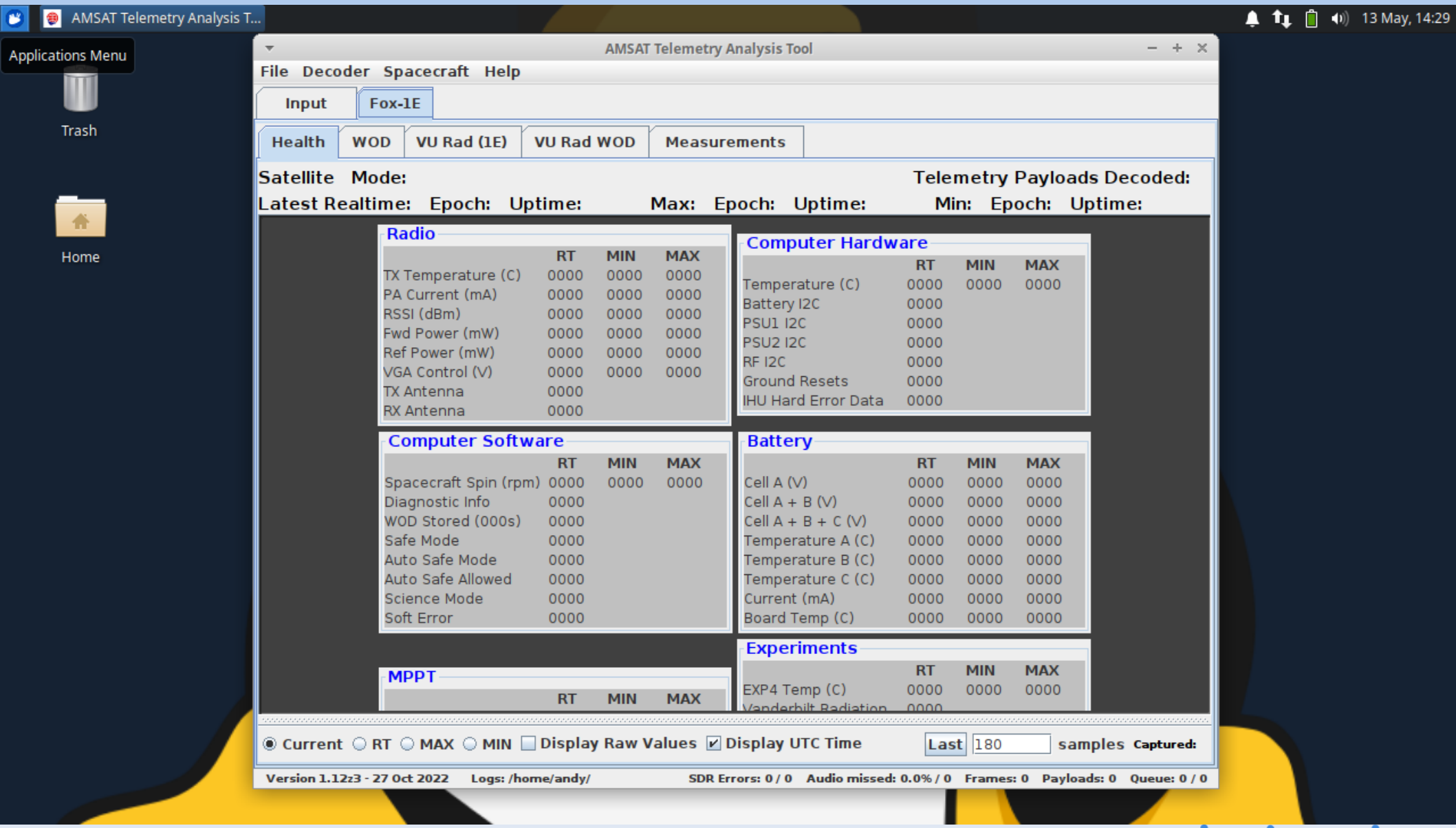
kubuntu

Satellites Menu



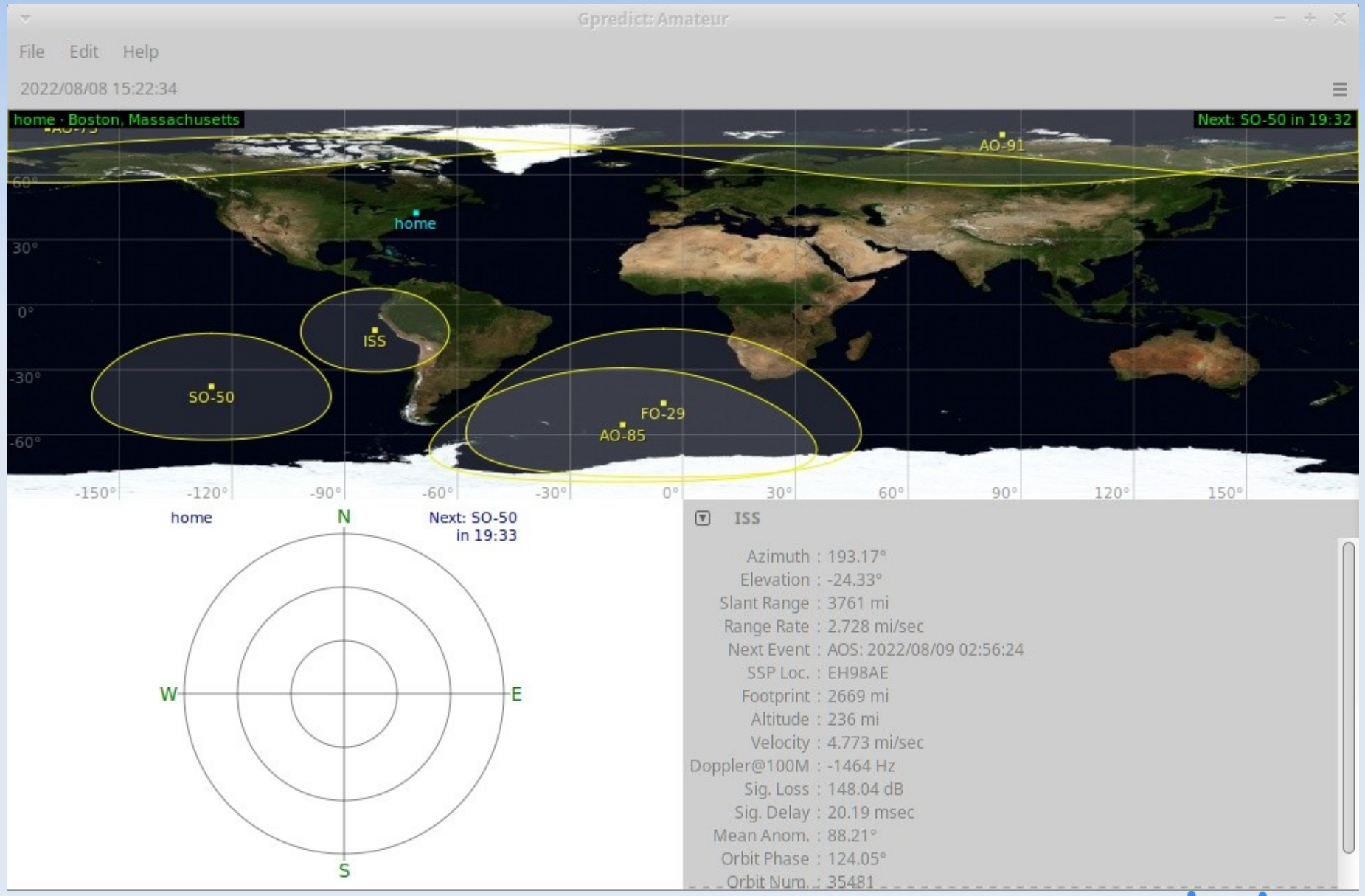
kubuntu

Satellites - FoxTelem



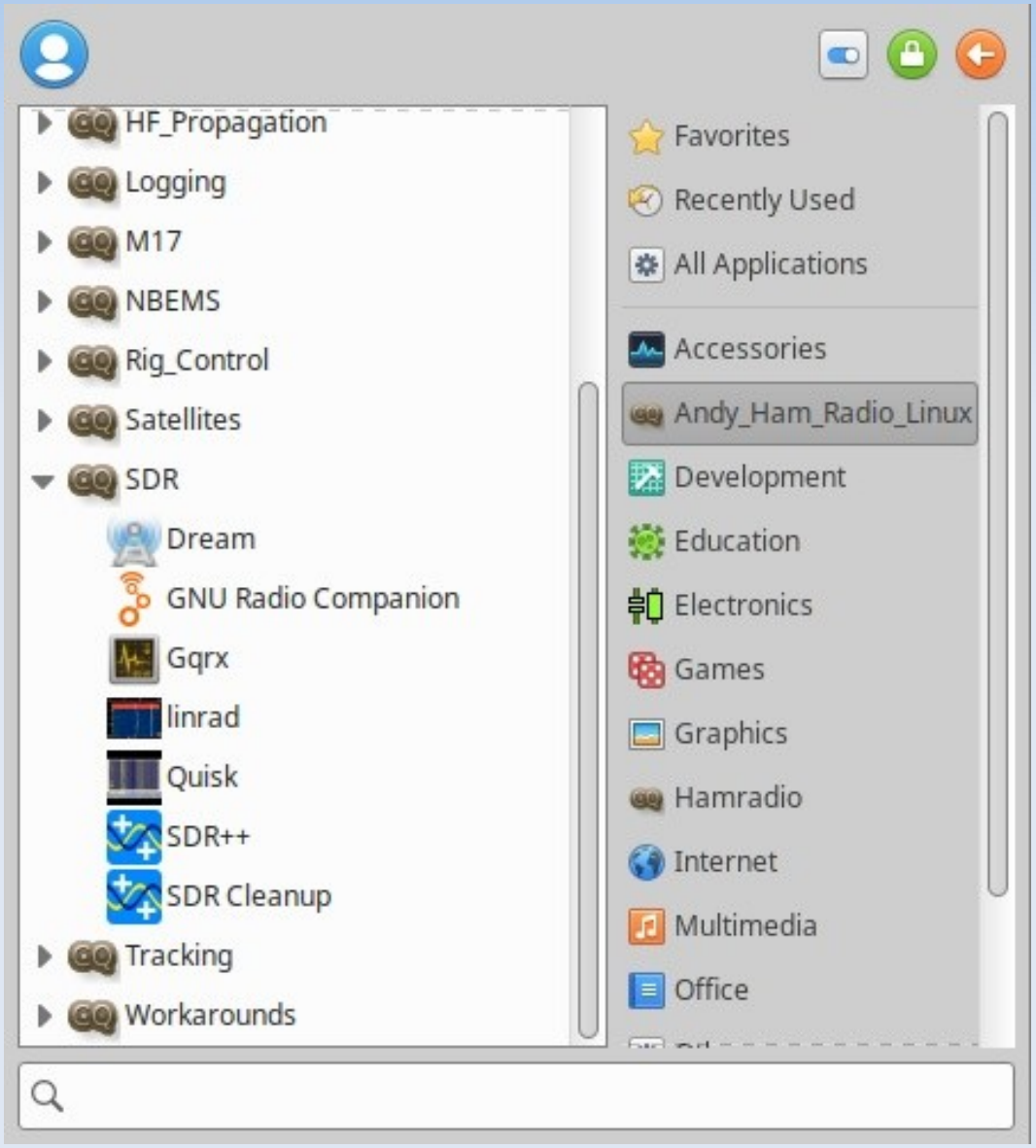
kubuntu

Satellites - gpredict



kubuntu

SDR Menu

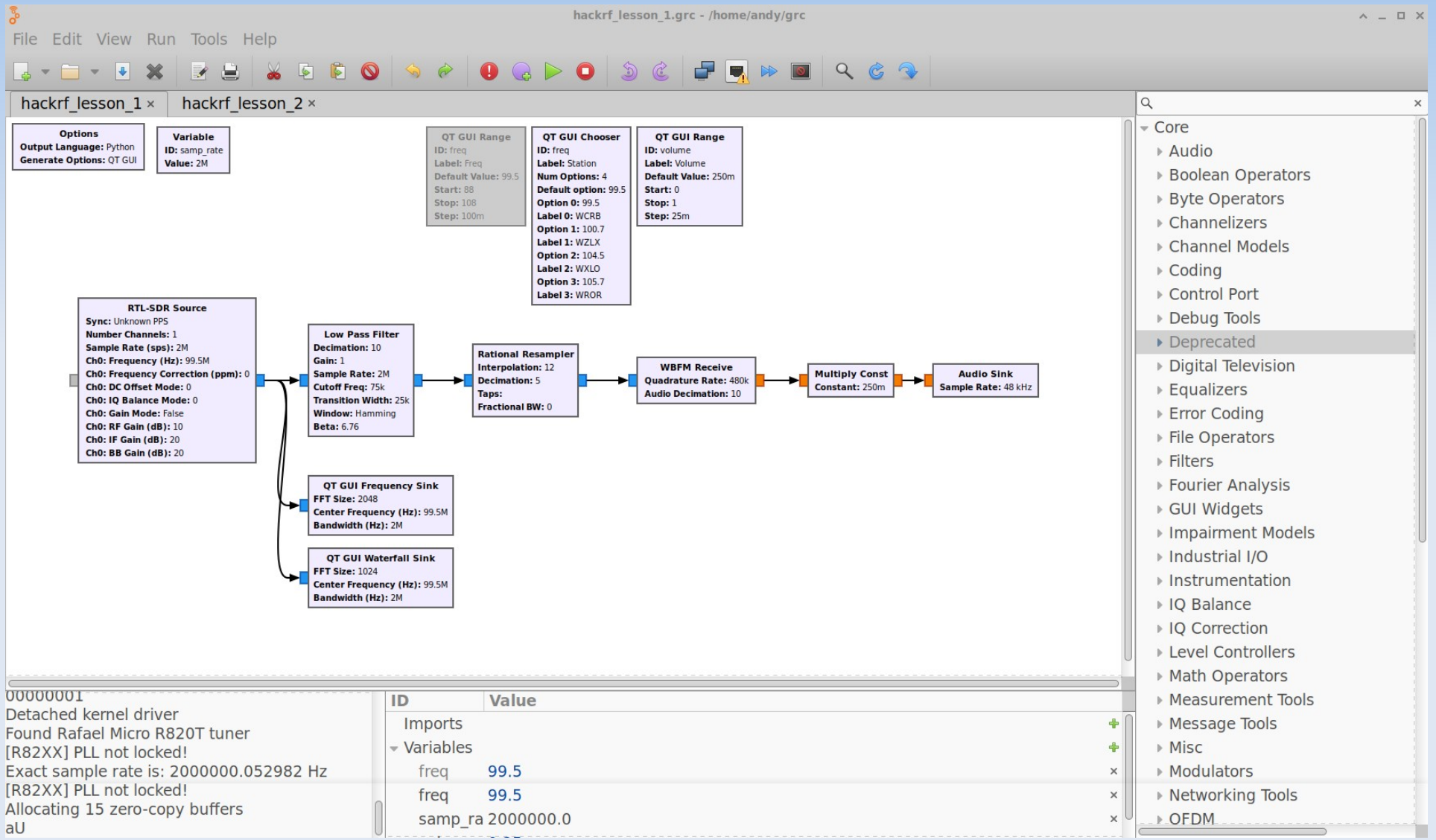


kubuntu

SDR – GNU Radio Companion

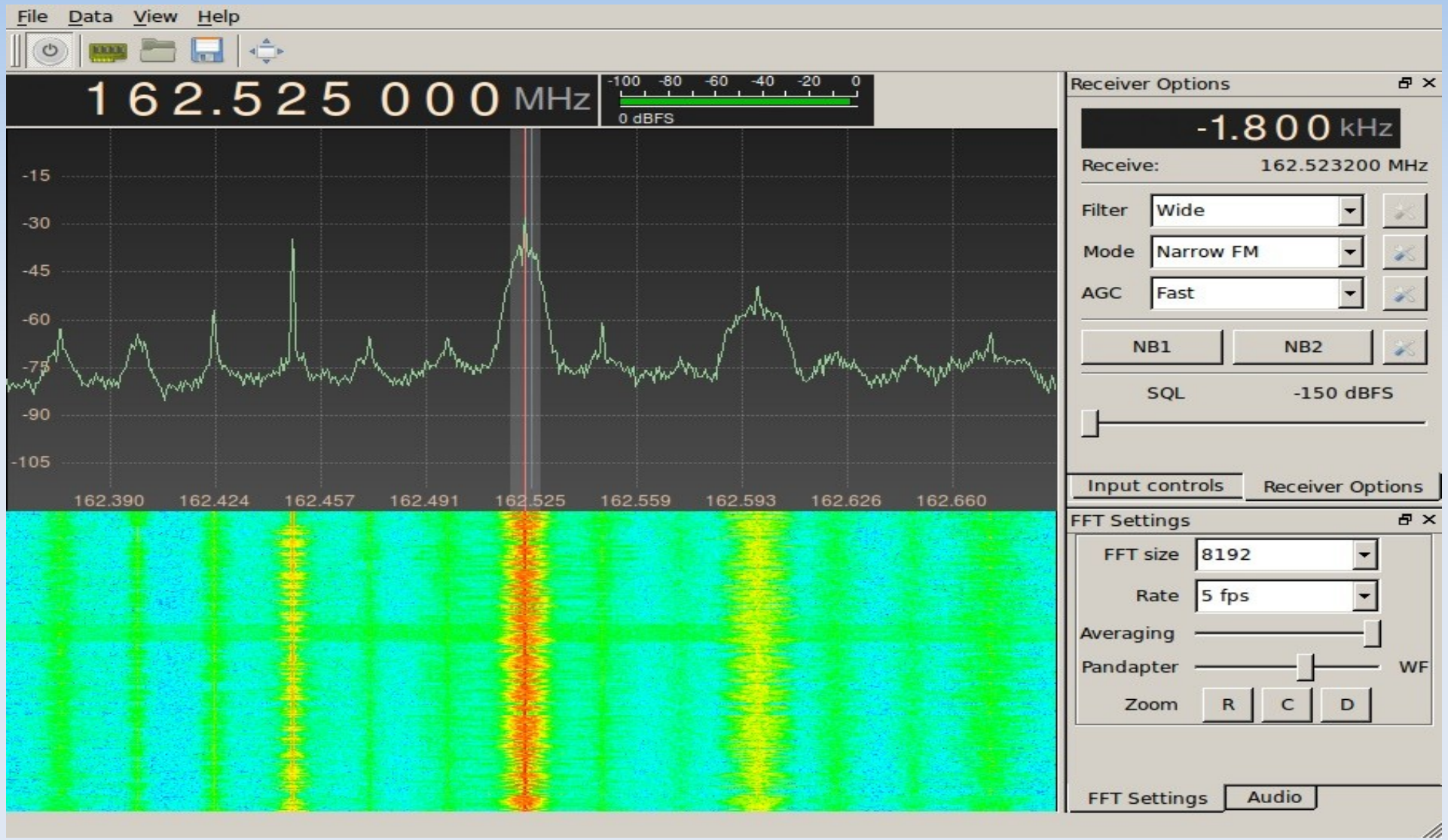
- SDR = Software Defined Radio
- Draw a block diagram of your signal processing
- GRC will write the Python code and execute it
- Supports SDR devices such as:
  - RTL-SDR dongle
  - HackRF
- Many tutorials are available online

SDR – GNU Radio Companion #1



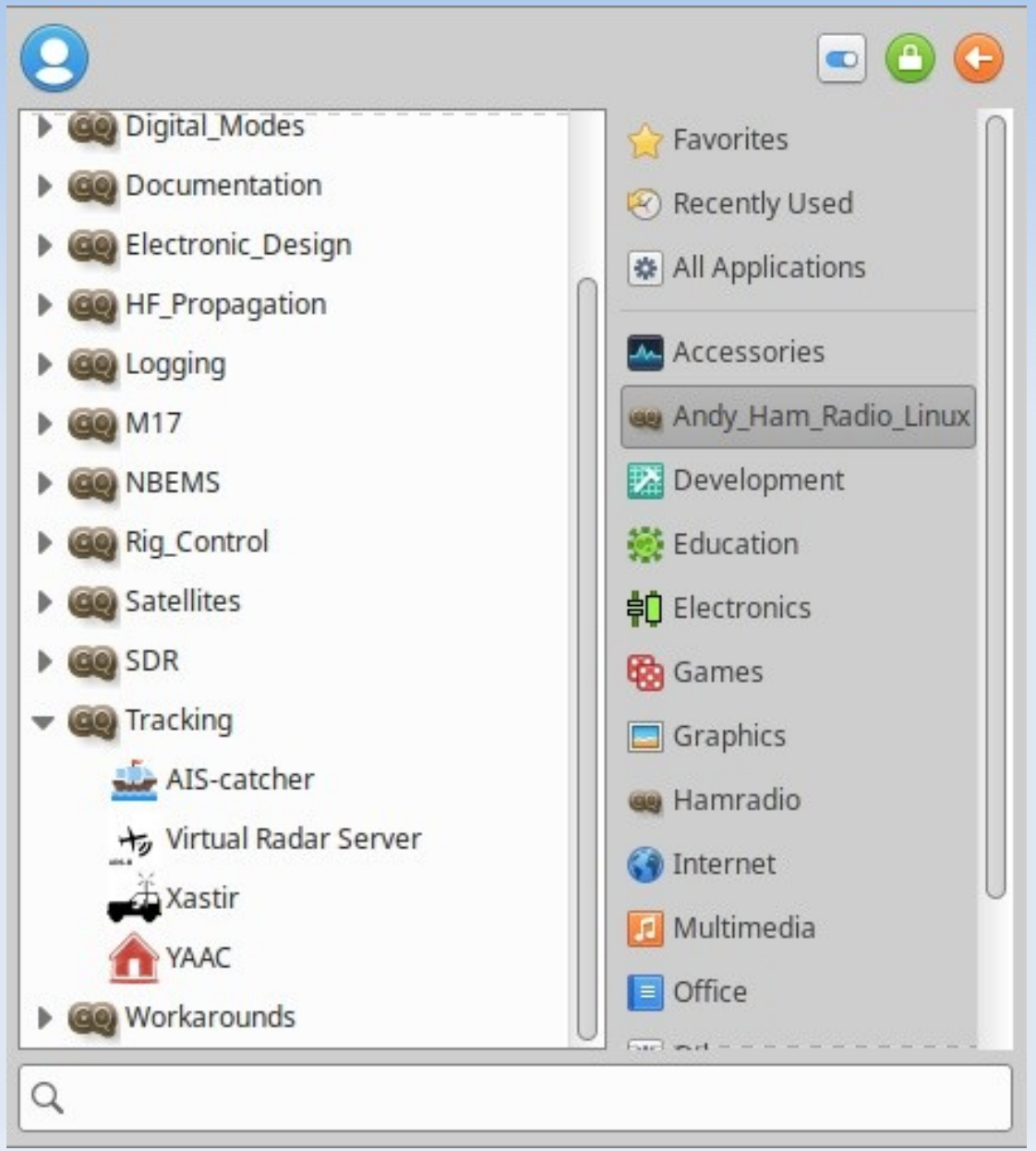
kubuntu

SDR - gqrx



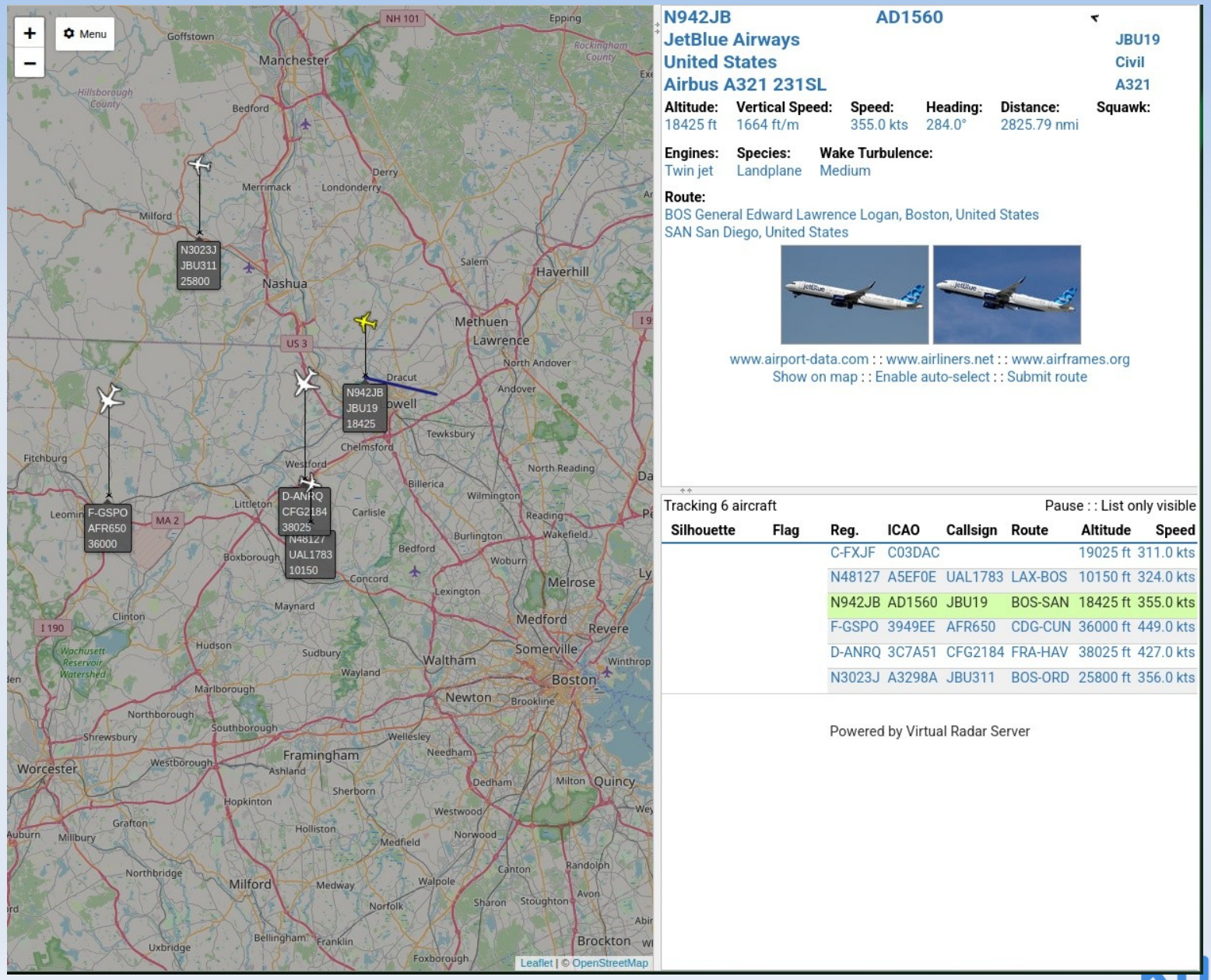
kubuntu

Tracking Menu



kubuntu

Tracking - Virtual Radar Server



Kubuntu

What's Hot?

- HamClock and similar programs
  - Elwood Downey WB0OEW (SK)
  - Many people working to keep HamClock alive
  - Many similar programs are in development
  - Stay tuned!
- FT2 digital mode
  - Created by hams in Italy
  - 4 times faster than FT8
  - First QSOs: 16-Feb-2026

Status of AHRL

- First release May 2011
- 36 versions later in 2025 …..
  - More Linux flavors are supported
  - Raspberry Pi 4/5/400/500 are now supported
  - Many thanks to the community!
    - actively reporting bugs
    - suggesting new programs
    - interest seems to be high based on downloads
  - Many thanks to ARRL for using AHRL!
  - KB1OIQ remains enthusiastic!

kubuntu

v26e Downloads

KB1OIQ - Andy's Ham Radio Linux

Install ham radio software on Debian Live, RPi OS, or Ubuntu Linux
Brought to you by: andystewart

Summary | Files | Reviews | Support | Wiki | Tickets ▾ | News | Discussion | Admin | Mailing Lists | Add New...

Downloads
3,824
2025-11-25 to 2026-02-23

Countries
Top: **US**, at 47%

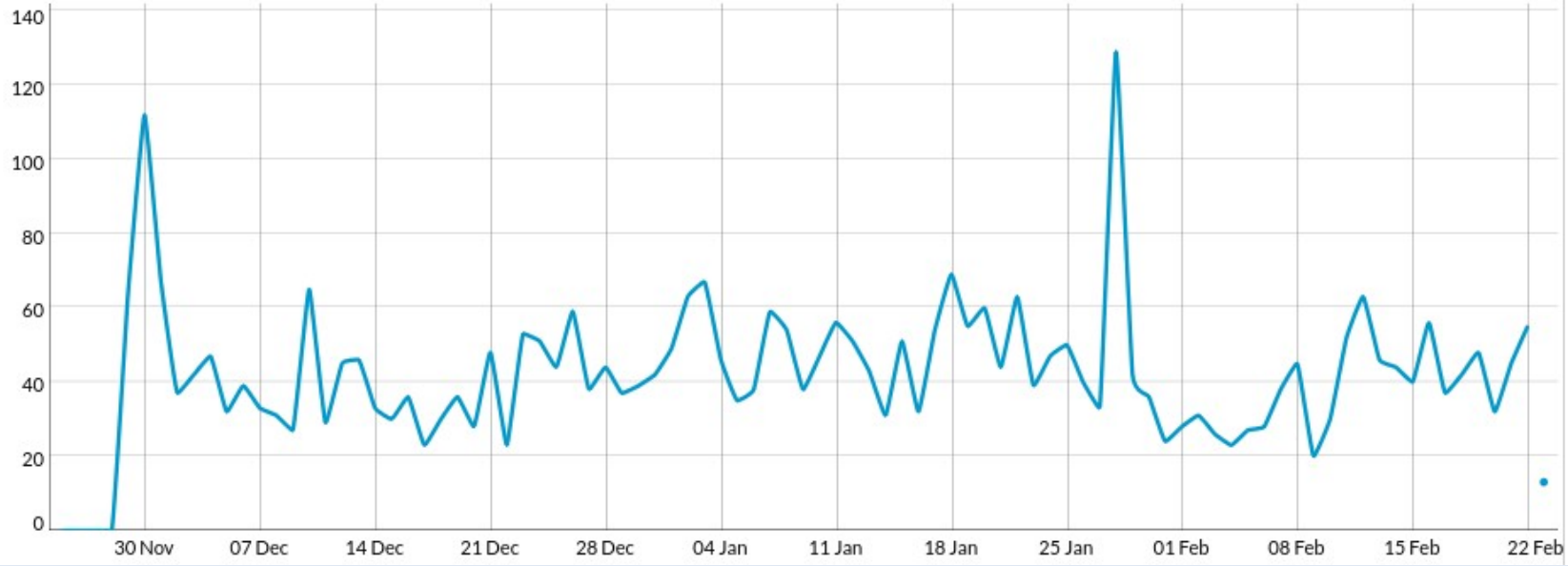
Operating Systems
Top: **Linux**, at 55%

Download Statistics

All Files / v26e / andy_v26e.tar.gz (Change File)

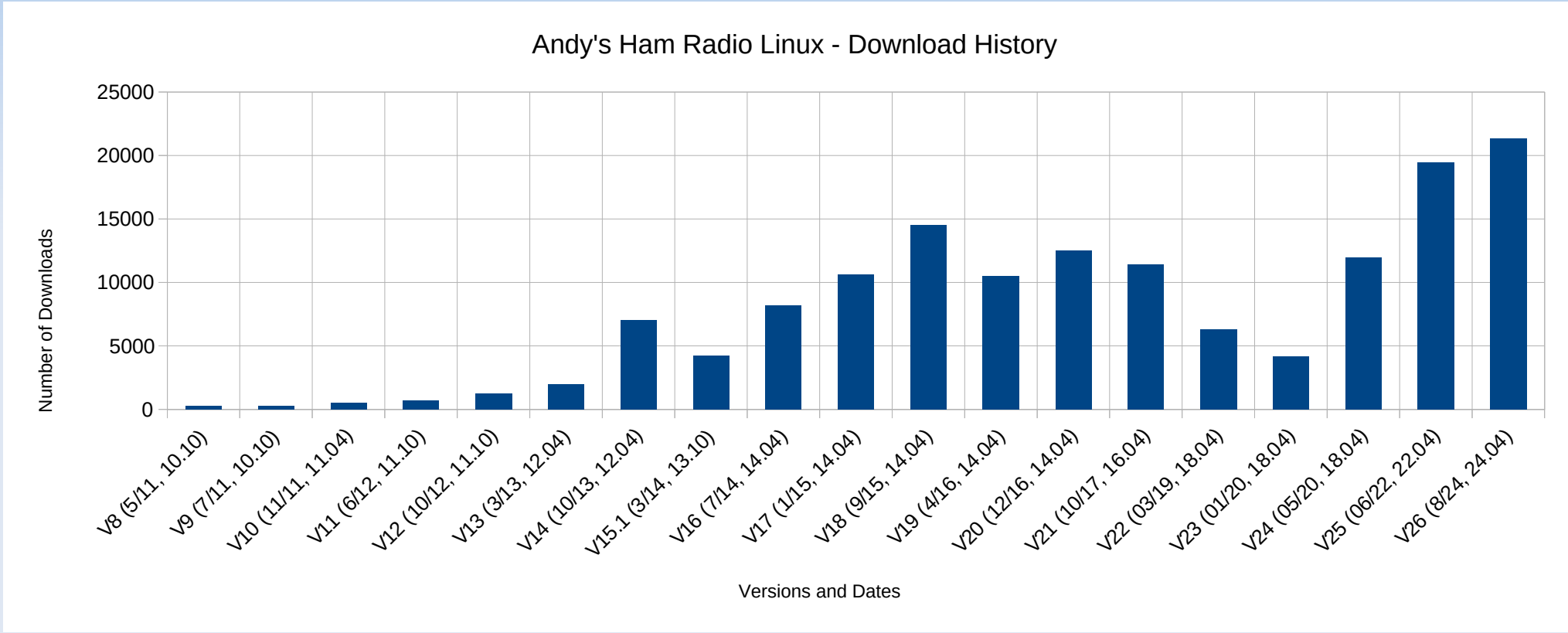
Date Range: 2025-11-25 to 2026-02-23

Daily | Weekly | Monthly



kubuntu

Downloads by Version



kubuntu

Downloads by Geography

KB1OIQ - Andy's Ham Radio Linux

Install ham radio software on Debian Live, RPi OS, or Ubuntu Linux
Brought to you by: andystewart

Summary | Files | Reviews | Support | Wiki | Tickets ▾ | News | Discussion | Admin | Mailing Lists | Add New...

Downloads
3,824
2025-11-25 to 2026-02-23

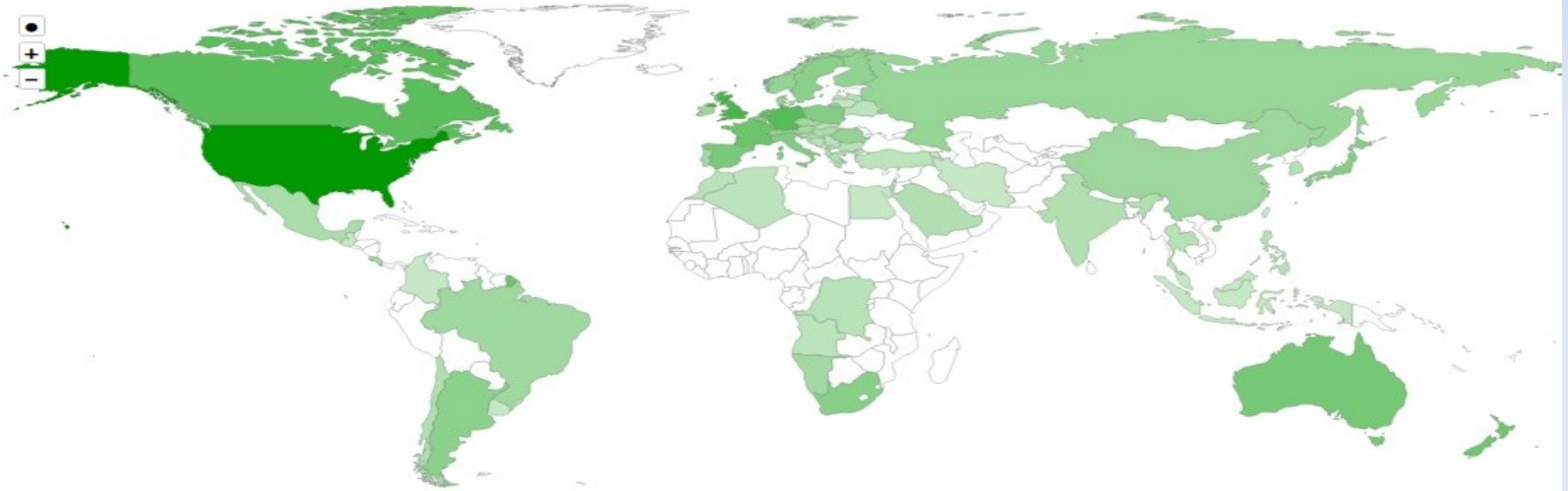
Countries
Top: **US**, at 47%

Operating Systems
Top: **Linux**, at 55%

Download Statistics

All Files / v26e / andy_v26e.tar.gz (Change File)

Date Range: 2025-11-25 to 2026-02-23



OS downloads as: Percent

	Country	Android	Linux	Macintosh	Unknown	Windows	Total
1.	United States	0%	62%	4%	9%	25%	1,814
2.	United Kingdom	0%	59%	2%	3%	35%	324
3.	Germany	1%	54%	1%	7%	36%	216
4.	Canada	1%	74%	2%	4%	20%	183

kubuntu

Awarded 03/2022

- 100,000 downloads later…….
- https://nediv.arrl.org/2022/03/02

kubuntu

Total Downloads to Date

- 147,000 downloads from 2011 to 23-Feb-2026

kubuntu

Related Online Videos

- RATPAC talk (1/2025)
  - Radio Amateur Training
    Planning and Activities Committee
  - Search on YouTube for RATPAC KB1OIQ
    2,500 views as of 02/2026 – Thank you!
- Dayton Hamvention 5/2025
  - Search on YouTube ”DARA Hamvention Linux”
    5,000 views as of 02/2026 – Thank you!
- The Old Tech Guy (KB9RLW) (02/2026)
  Search for ”Andy’s Ham Radio Linux” 2025
  16,000 views – THANK YOU!!!

kubuntu

Sourceforge

- http://www.sourceforge.net
- Search for KB1OIQ … OR ...
- Search for Andy’s Ham Radio Linux
- The green ”Download” button will give you the most recent version.
- In ”Files”, grab the GETTING_STARTED document for the most recent version

Last Slide!

- Slides available:
  - Email: kb1oiq@arrl.net
- Thanks for coming to this talk!
- Have a lot of fun, and 73 de Andy KB1OIQ ..

- … and that’s the way it is ...

kubuntu